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*FINAL*

**ENVIRONMENTAL ASSESSMENT**

**FOR THE**

**CONSOLIDATION OF 88<sup>TH</sup> AIR BASE WING**

**CIVIL ENGINEER OPERATIONS**

**WRIGHT-PATTERSON AIR FORCE BASE, OHIO**

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**SEPTEMBER 2012**



**88<sup>TH</sup> AIR BASE WING**  
**ASSET MANAGEMENT DIVISION**  
**PLANNING AND REAL ESTATE SECTION**

Report Documentation Page		Form Approved OMB No. 0704-0188
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14. ABSTRACT <b>Wright&amp;#8208;Patterson AFB proposes to consolidate the 88 ABW Civil Engineer (CE) operations and facilities. The Proposed Action combines facilities to allow CE activities to operate efficiently from two locations. Most of the CE functions already operate from these locations, but the consolidation would allow for more practical equipment storage, efficient use of space, and improved management of staff. The consolidations would decrease the need for additional buildings, which in turn lowers utility and long&amp;#8208;term maintenance costs. The interior of Facility 30022 would be renovated to accommodate various shops located adjacent to F/30022. These shops would be demolished at some time in the future as part of this action. Facility 20614 would be expanded and a new storage building constructed to accommodate the operations relocated from F/20745. Recreation vehicles (RV) stored at F/20614 would be relocated to a storage lot at F/20745. This environmental assessment evaluates and compares the potential for significant adverse impacts of implementing the Proposed Action, an alternative that keeps the existing RV Storage Lot at F/20614 and maintenance equipment at F/20745 and from taking no action. The Proposed Action and alternatives would have no impact to biological resources, cultural resources environmental justice/protection of children, geology and soils, land use, noise, socioeconomics, and visual resources. Impacts that are temporary or not significant would occur to air quality and transportation. Adherence to regulations and best management practices would ensure no significant impacts related to hazardous materials, waste management, health and safety, and water resources. The No Action alternative would have no impact. In accordance with Section 7 of the Endangered Species Act, Wright&amp;#8208;Patterson AFB consulted with and received concurrence from the U.S. Fish and Wildlife Service with the determination of no effect to listed species. In addition, Wright&amp;#8208;Patterson AFB consulted with and received concurrence from the State Historic Preservation Officer under Section 106 of the National Historic Preservation Act with the determination of no adverse effect to historic properties.</b>		
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**FINAL**  
**FINDING OF NO SIGNIFICANT IMPACT**  
**FOR THE CONSOLIDATION OF 88<sup>th</sup> AIR BASE WING**  
**CIVIL ENGINEER OPERATIONS**  
**WRIGHT-PATTERSON AIR FORCE BASE, OHIO**

**20 September 2012**

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Pursuant to the Council on Environmental Quality regulations implementing the National Environmental Policy Act (NEPA) (40 Code of Federal Regulations [CFR] 1500-1508), Department of Defense Directive 6050.1, and Air Force regulation 32 CFR Part 989, the 88<sup>th</sup> Air Base Wing (ABW) Civil Engineer Directorate, Asset Management Division prepared an Environmental Assessment (EA) for the relocation and consolidation of the Civil Engineer (CE) operations in Areas A and B, Wright-Patterson Air Force Base (AFB), Ohio. The EA is incorporated by reference into this finding per 40 CFR 1508.13.

**Purpose and Need:** Wright-Patterson AFB proposes to consolidate the 88 ABW/CE operations and facilities. The purpose for consolidating CE facilities is to improve operational efficiency from two locations. Most of the CE functions already operate from these two locations, but the consolidation allows for more equipment storage, efficient use of space, and improved management of personnel. The consolidation decreases the need for additional buildings, which in turn lowers utility and long-term maintenance costs.

**Proposed Action/Preferred Alternative:** The Proposed Action consolidates CE operations in Areas A and B of Wright-Patterson AFB. The consolidation consists of renovating shops located in Building 22 in Area A (Facility 30022) of the base. The interior renovations allow for reorganization of the existing operations located in Facility 30022 (F/30022) and make room to relocate the CE shops and operations from the smaller buildings (F/30017, F/30021, and F/30029) adjacent to F/30022.

The Proposed Action also relocates CE grounds and maintenance operations in Area B from F/20745 to F/20614. Facility 20745 has reached its life-cycle due to age, structural damage, and failing roof system. Facility 20614 will be renovated and expanded by 6,000 square feet to accommodate existing functions and other functions to be relocated from F/20745. A new 7,000 square foot storage facility will be constructed on the existing lot adjacent to F/20614 for storage of grounds maintenance equipment.

West of F/20614 is the Recreational Vehicle (RV) Storage Lot that will be relocated to the existing outdoor equipment storage lot south of F/20745. The vacated area at F/20614 will be used for outdoor equipment storage and parking for government and private vehicles. The outdoor equipment storage lot at F/20745 is already disturbed ground with adequate space to accommodate the existing capacity of RVs.

Facility 20745 and the buildings adjacent to Facility 30022 (30017, 30021, and 30029) will be demolished at some time in the future after they are vacated as part of the Proposed Action.

**RV Storage Alternative:** An alternative to the Proposed Action leaves the RV Storage Lot in its existing location west of F/20614 instead of relocating the RVs to the vacated outdoor equipment storage yard next to F/20745. This alternative leaves the grounds and maintenance equipment of the horizontal maintenance element of CE at F/20745 while personnel and functions will relocate and consolidate with other CE operations at F/20614.

**No Action Alternative:** The CE consolidation project will not be implemented and the condition of F/20745 will continue to decline making it difficult and costly for 88 ABW/CE personnel to operate from this location. The No Action Alternative will include a continuation of RV storage west of F/20614. There will be no interior renovations to F/30022 and conditions will remain as they are today for 88 ABW/CE personnel.



## **Environmental Consequences of Proposed Action and RV Storage Lot Alternative:**

Air Quality (EA Section 4.1): There will be short-term increases in fugitive dust and construction equipment emissions during construction of the proposed action or alternative. The construction and operation of F/20614 will conform to the PM<sub>2.5</sub> State Implementation Plan and there will be no impact on the ozone maintenance status.

Biological Resources (EA Section 4.2): The proposed action or alternative will not disturb any suitable wildlife habitat. In accordance with the Endangered Species Act Section 7 consultation process, the U.S. Fish and Wildlife Service concurs with the determination made by Wright-Patterson AFB that the proposed action or alternative will not affect listed species.

Cultural Resources (EA Section 4.3): There will be no disturbance to properties listed or eligible for listing on the National Register of Historic Places during construction of the proposed action or alternative. The renovation and construction of the addition to F/20614 will not impact any building with contributing characteristics to the Wright Field Historic District because of distance and visibility. The buildings to be demolished are not historically or architecturally significant. In accordance with the National Historic Preservation Act Section 106 consultation process, the Ohio State Historic Preservation Officer concurs with the determination made by Wright-Patterson AFB that the proposed action or alternative will have no adverse effect on historic properties.

Environmental Justice, Protection of Children (EA Section 3.0): The proposed action or alternative will not cause any adverse effects and the actions are all within the confines of Wright-Patterson AFB; therefore, any low income or minority populations or children that may reside outside the confines of Wright-Patterson AFB will not be disproportionately or adversely affected.

Geology and Soils (EA Section 3.0): There will be minor grading and compacting of the sites for construction of the proposed action or alternative. Sites have been previously disturbed and further disturbance for construction will not have any impact to soils.

Hazardous Materials and Waste Management (Section 4.4): Asbestos-containing materials and lead-based paint will require appropriate abatement. Minor amounts of hazardous waste generated during construction and hazardous materials used during operation will be handled in accordance with Wright-Patterson AFB policies. Construction will involve minor grading and scraping within the 300-foot boundary of Earthfill Disposal Zone number 8. Digging, construction, or other soil disturbance in this zone will require approval by Wright-Patterson AFB Environmental Restoration Program personnel and Ohio EPA.

Health and Safety (EA Section 4.5): The proposed action or alternative will not expose the public or Wright-Patterson AFB population to any health or safety risks. Adherence to safety standards will prevent risks to safety and health of construction workers.

Land Use (EA Section 3.0): The location for the proposed action or alternative is consistent with the Wright-Patterson AFB General Plan; a change in land use designation is not required.

Noise (EA Section 3.0): The proposed action or alternative will not introduce any new source of noise to the area during construction or operation.

Socioeconomics (EA Section 3.0): There will be no changes to the local economy or employment. Construction dollars for the proposed action or alternative will provide negligible, yet beneficial gains to the local economy.

Transportation and Infrastructure (EA Section 4.6): There will be temporary increases in traffic during construction of the proposed action. Other than the access road to F/20614, no roadway improvements are planned or necessary. The utility infrastructure is adequate for the proposed action or alternative.

Visual Resources (EA Section 3.0): There is no unique visual quality to the surrounding area that could be affected by the proposed action or alternative.

**Water Resources (EA Section 4.7):** The proposed action or alternative is not in the floodplain. Excavation or grading during construction for the proposed action or alternative will not intercept or disturb groundwater sources or surface water protection areas.


**Cumulative Impacts (EA Section 4.8):** The consolidation of CE operations on Wright-Patterson AFB will not have cumulative impacts on biological resources, cultural resources, soils, land use, and safety and health beyond the boundaries of the areas affected by the proposed project, as well as the immediately adjacent areas. Construction emissions are short-term and with adequate dust control measures during and after construction, cumulative increases in PM<sub>2.5</sub> emissions will not exceed National Ambient Air Quality Standards or affect the attainment designation in the area. Wright-Patterson AFB will ensure that the small amounts of hazardous waste generated by the proposed action are adequately managed in combination with other ongoing and future projects.

**Mitigation Measures and Best Management Practices:** The proposed action or RV Storage Lot alternative will not cause any adverse impacts that must be mitigated. Construction-related impacts are temporary, short-term, and will cease after construction is complete. Such impacts are addressed by best management practices or permits required by federal, state, or local regulations to minimize or control the adverse effects of construction.

**Agency Consultation:** In accordance with NEPA, 42 U.S.C. §4321 et seq. (1969), informal consultation was solicited with applicable agencies to seek input on the likelihood of environmental or other impacts resulting from the proposed action or alternative. A summary of the outcome of consultation efforts with pertinent agencies is included as Appendix A of the EA.

**Public Notice:** A public notice was posted in the *Dayton Daily News* on September 13, 2012, initiating the public review period for 15 days. Copies of the Draft Final EA were placed in the Fairborn Public Library. No comments were received during the public review period.

**Finding of No Significant Impact:** The Proposed Action consolidates CE operations in Areas A and B of Wright-Patterson AFB. Under the No Action Alternative, the CE consolidation project is not implemented and the condition of F/20745 will continue to decline making it difficult and costly for 88 ABW/CE personnel to operate from this location. The No Action Alternative will include a continuation of RV storage west of F/20614. There will be no interior renovations to F/30022 and conditions will remain as they are today for 88 ABW/CE personnel. Based upon my review of the facts and analysis contained in the EA, which is hereby incorporated by reference, I conclude that the Proposed Action or alternative will not have a significant impact on the natural or human environment. An Environmental Impact Statement is not required for this action. This analysis fulfills the requirements of NEPA, the President's Council on Environmental Quality regulations, 40 CFR 1500-1508, and 32 CFR 989.

  
DAVID A. PERKINS, P.E.  
Director  
Civil Engineer Directorate

Date: 28 Sep 12

*FINAL*

**ENVIRONMENTAL ASSESSMENT  
FOR THE  
CONSOLIDATION OF 88<sup>TH</sup> AIR BASE WING  
CIVIL ENGINEER OPERATIONS  
WRIGHT-PATTERSON AIR FORCE BASE, OHIO**

*Prepared for:*

**88<sup>th</sup> Air Base Wing  
Asset Management Division  
Planning and Real Estate Section**

*Prepared by:*

**Labat Environmental, Inc.  
1406 Fort Crook Road South, Suite 101  
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**Contract No. FA8601-11-F-0003  
Task Order 0010**

**September 2012**

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## COVER SHEET

**Responsible Agency:** U.S. Air Force, 88<sup>th</sup> Air Base Wing (ABW), Wight-Patterson Air Force Base (AFB), Ohio

**Proposed Action:** Consolidation of 88<sup>th</sup> ABW Civil Engineer Operations at Wright-Patterson AFB

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**Report Designation:** Final Environmental Assessment

**Abstract:** Wright-Patterson AFB proposes to consolidate the 88 ABW Civil Engineer (CE) operations and facilities. The Proposed Action combines facilities to allow CE activities to operate efficiently from two locations. Most of the CE functions already operate from these locations, but the consolidation would allow for more practical equipment storage, efficient use of space, and improved management of staff. The consolidations would decrease the need for additional buildings, which in turn lowers utility and long-term maintenance costs. The interior of Facility 30022 would be renovated to accommodate various shops located adjacent to F/30022. These shops would be demolished at some time in the future as part of this action. Facility 20614 would be expanded and a new storage building constructed to accommodate the operations relocated from F/20745. Recreation vehicles (RV) stored at F/20614 would be relocated to a storage lot at F/20745. This environmental assessment evaluates and compares the potential for significant adverse impacts of implementing the Proposed Action, an alternative that keeps the existing RV Storage Lot at F/20614 and maintenance equipment at F/20745, and from taking no action.

The Proposed Action and alternatives would have no impact to biological resources, cultural resources, environmental justice/protection of children, geology and soils, land use, noise, socioeconomic, and visual resources. Impacts that are temporary or not significant would occur to air quality and transportation. Adherence to regulations and best management practices would ensure no significant impacts related to hazardous materials, waste management, health and safety, and water resources. The No Action alternative would have no impact.

In accordance with Section 7 of the Endangered Species Act, Wright-Patterson AFB consulted with and received concurrence from the U.S. Fish and Wildlife Service with the determination of no effect to listed species. In addition, Wright-Patterson AFB consulted with and received concurrence from the State Historic Preservation Officer under Section 106 of the National Historic Preservation Act with the determination of no adverse effect to historic properties.

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## APPENDICES

Appendix A Interagency and Intergovernmental Coordination for Environmental Planning

## ACRONYMS AND ABBREVIATIONS

ABW	Air Base Wing
ACM	Asbestos Containing Material
AFB	Air Force Base
AFOSH	Air Force Occupation Safety and Health
APE	Area of Potential Effect
Base	Wright-Patterson Air Force Base
CE	Civil Engineer
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
EA	environmental assessment
EFDZ	earthfill disposal zone
EIAP	Environmental Impact Analysis Process
EPA	Environmental Protection Agency (U.S. or Ohio)
F	Facility
°F	degrees Fahrenheit
FONSI	Finding of No Significant Impact
ICRMP	Integrated Cultural Resources Management Plan
IICEP	Interagency and Intergovernmental Coordination for Environmental Planning
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
OSHA	Occupational Safety and Health Act
OU	operable unit
PM	particulate matter
PM <sub>2.5</sub>	particulate matter less than 2.5 microns in diameter
PM <sub>10</sub>	particulate matter less than 10 microns in diameter
SHPO	State Historic Preservation Office
SIP	State Implementation Plan
sq. ft.	square feet
SWP3	Storm Water Pollution Prevention Plan
tpy	tons per year
US	United States
USFWS	U.S. Fish and Wildlife Service
WPAFB	Wright-Patterson Air Force Base

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## INTRODUCTION

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## 1.0 INTRODUCTION

Wright-Patterson Air Force Base (AFB) proposes to consolidate the 88<sup>th</sup> Air Base Wing (ABW) Civil Engineer (CE) operations and facilities in Areas A and B. The consolidation includes the renovation of Facility 30022 (F/30022) and the relocation of shops located in Area A to F/30022, the relocation of CE operations in Area B from F/20745 to F/20614, and the relocation of the recreational vehicle (RV) storage area.

This environmental assessment (EA) evaluates the potential for environmental impacts related to the relocation and consolidation of the CE operations in Areas A and B at Wright-Patterson AFB (WPAFB), and the future demolition of F/20745 and three buildings (F/30017, F/30021, and F/30029) behind F/30022. This EA also identifies regulatory requirements and environmental commitments to minimize the potential environmental consequences associated with the consolidation project.

### 1.1 Purpose and Need

The purpose of the Proposed Action is to consolidate CE functions in Areas A and B to allow the 88 ABW/CE operations to run more efficiently. Six existing buildings are part of the Proposed Action – four in Area A and two in Area B. One new storage building is proposed in Area B.

In Area A, F/30022 has been the headquarters building for the base civil engineer functions and shops since it was built in 1943 as the Construction and Utilities building. Ancillary CE shops and storage are located in smaller buildings (F/30017, F/30021, and F/30029) adjacent to F/30022. An interior renovation of F/30022 is needed to reorganize existing shops and operations for a more efficient facility and to make room to relocate the ancillary shops from the adjacent buildings. The purpose for relocating and consolidating all CE functions within F/30022 is for greater operational efficiency of CE operations. Complete and partial demolition of the adjacent buildings at some time in the future would provide additional area within the CE compound for future undertakings.

In Area B, grounds and maintenance operations from F/20745 would be relocated to F/20614. Facility 20745 was built in 1944 as the Quartermaster Laundry and remained as the base laundry for many years. It has been used as the Grounds and Pavements Facility since 1987. The building has reached its life-cycle due to age, structural damage, and failing roof system. The outdoor storage yard associated with F/20745, commonly known as the Area B CE Compound Yard, stores tractors, large equipment, and spare parts. This equipment would be relocated to a new storage area at F/20614, leaving the CE Compound Yard vacant.

Built in 1993, F/20614 is currently used for mechanical, electrical, and the Civil Engineer Material Acquisition System (CEMAS) offices, shops, assignment areas, restrooms, and locker areas. An addition of 6,000 square feet (sq. ft.) to F/20614 and a new 7,000 sq. ft. storage facility would maintain these existing functions and accommodate the grounds maintenance shop area relocated from F/20745. The additions would include office space for the Civil Engineer Operations and Support Housing and Small Computer Support supervisors, a breakroom and assignment/work area for grounds maintenance personnel, and storage space for grounds maintenance equipment.

To accommodate the proposed addition to F/20614 and to relocate the grounds maintenance equipment, the existing RV Storage Lot west of F/20614 would be relocated to the outdoor equipment and storage lot (Area B CE Compound Yard) associated with F/20745.

The purpose and need for the CE consolidation project is to combine facilities to allow CE activities to operate efficiently from two locations. Most of the CE functions already operate from these locations, but the consolidation would allow for more practical equipment storage, efficient use of space, and improved management of personnel. The consolidations would decrease the need for additional buildings, which in turn lowers utility and long-term maintenance costs.

## 1.2 Location

Wright-Patterson AFB is located in Greene and Montgomery counties in the State of Ohio. The cities of Fairborn, Beavercreek, Riverside, and Dayton border the Base (Figure 1-1). The Base includes both Wright and Patterson Fields, which were originally Wilbur Wright Field and Fairfield Aviation General Supply Depot. Ohio State Route 444 divides WPAFB into Area A (Patterson Field) to the north and Area B (Wright Field) to the south.

Located in Area A, the renovation of F/30022 and the relocation of various shops behind F/30022 are near the intersection of Skeel Avenue and Littrell Road. This is the current location of the 88 ABW/CE operations. The proposed relocation from F/20745 to F/20614 is within the developed part of Area B. Facility 20745 is located along Kauffman Avenue, between Skyline Drive and 1st Street. Facility 20614 is along Skyline Drive between 12th Street and 13th Street. Figure 1-2 shows the locations of these facilities.

## 1.3 Environmental Study Requirements

This section provides a brief summary of the National Environmental Policy Act (42 United States Code 4321 et seq.), which is the guiding statute for preparing this EA, and other regulatory requirements that apply to the Air Force's Environmental Impact Analysis Process (EIAP).

### 1.3.1 *National Environmental Policy Act*

The National Environmental Policy Act (NEPA) is a mandate for federal agencies to utilize a systematic, interdisciplinary approach to environmental planning and decision-making. The intent of NEPA is to minimize adverse impacts to the human environment through available information, evaluating alternative actions, and implementing mitigation measures. The Council on Environmental Quality (CEQ) issued regulations (40 Code of Federal Regulations [CFR] 1500-1508) to implement NEPA that address both the content and procedural aspects of the environmental analysis. This EA is a concise public document intended to provide agency decision-makers with sufficient information and analysis to make a Finding of No Significant Impact (FONSI) or decide an Environmental Impact Statement is necessary to address significant impacts.

The Air Force regulations for the EIAP (32 CFR 989) provide procedures for the Air Force to achieve and maintain compliance with NEPA and CEQ regulations.

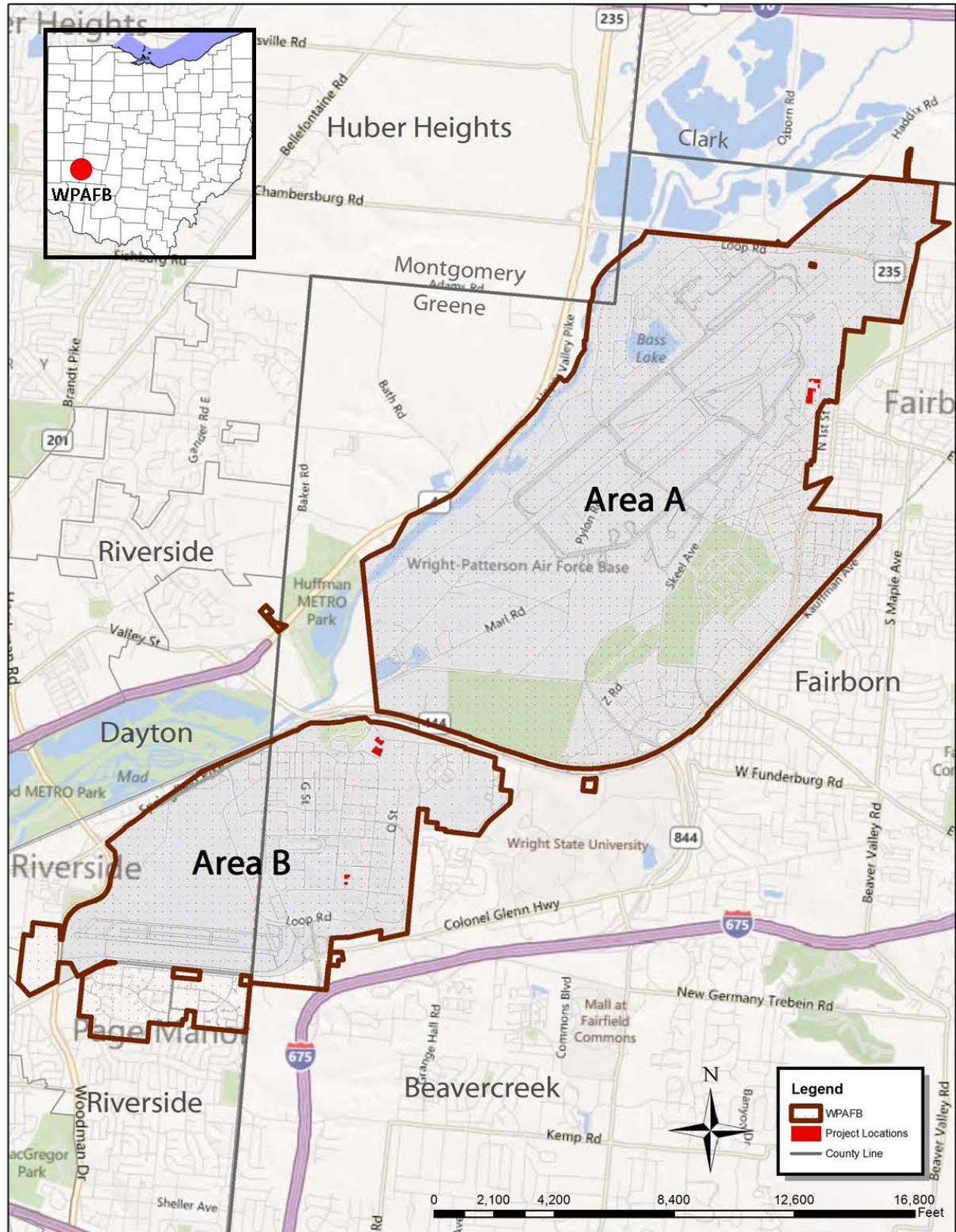


Figure 1-1: Location Map



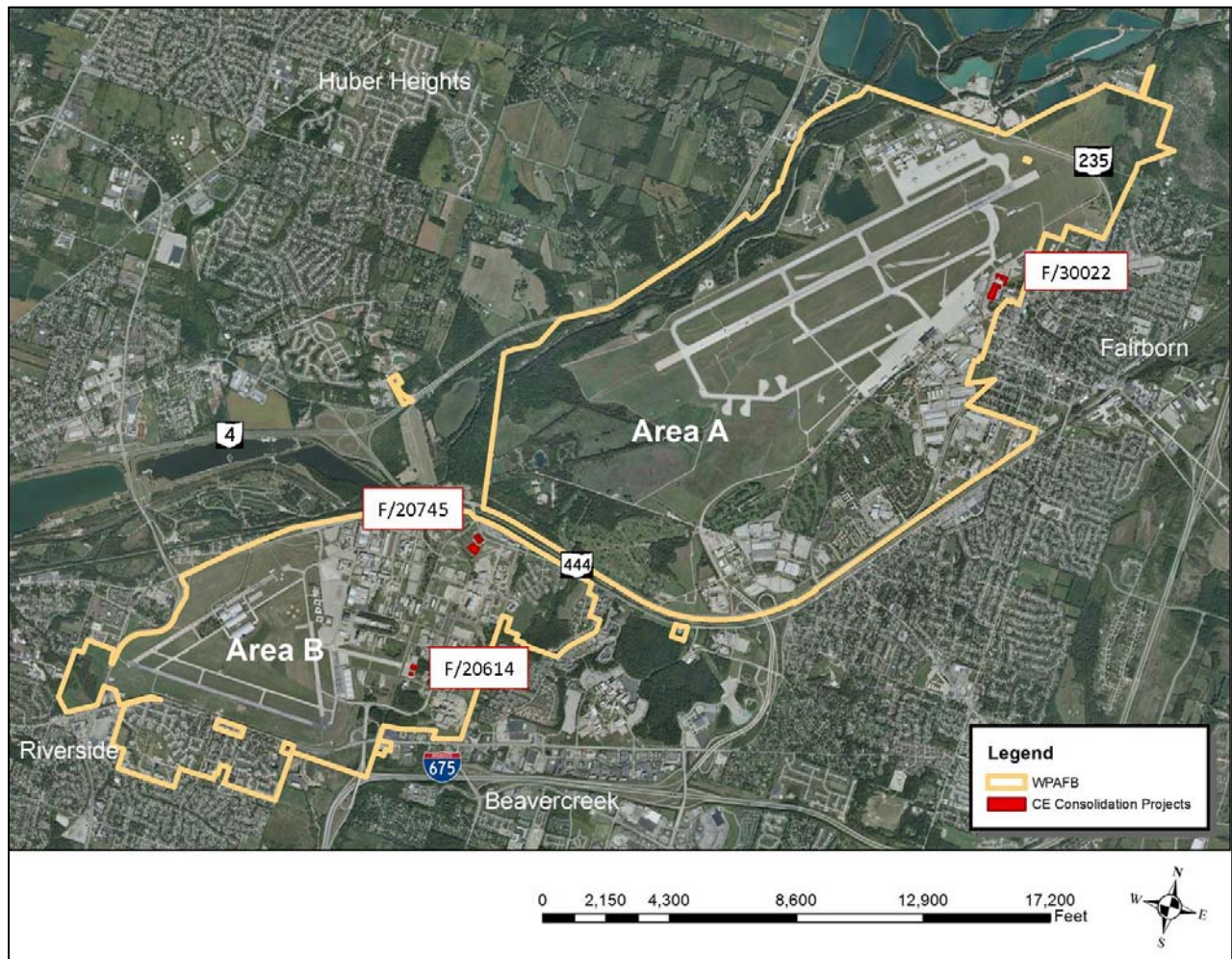


Figure 1-2: Location of CE Consolidation Projects

### 1.3.2 Interagency and Intergovernmental Coordination for Environmental Planning

Air Force Interagency and Intergovernmental Coordination for Environmental Planning (IICEP) implements the Department of Defense policy for reciprocal exchange of program and planning information with state, regional, and local agencies concerned with environmental planning. The IICEP process aids in identifying potential problems that may interfere with accomplishing the Air Force mission. Similar to the scoping (information-gathering) process of the CEQ regulations, IICEP promotes intergovernmental notification of proposed Air Force actions prior to making any detailed statement of environmental impacts. The correspondence received from the government agencies consulted on the CE Consolidation project is in Appendix A.

## 1.4 Scope of Environmental Analysis

The scope of the environmental analysis is based on the environmental resources and issues potentially affected by the Proposed Action and alternatives. The CEQ regulations and guidance and Air Force EIAP regulations emphasize that an EA should be a concise document; thus, this EA focuses on those

resources or issues that are appropriate for evaluation in context with the Proposed Action and alternatives.

Internal scoping discussions with WPAFB personnel identified environmental, social, and economic resources that are either present in or otherwise considered important to the project area. Scoping discussions and consultations with federal, state, and local resource agencies facilitate an efficient environmental analysis process by identifying resources and issues for full consideration and analysis in the EA, while devoting less attention and time to issues that are not relevant or affected by the Proposed Action and alternatives.

An initial scoping meeting was conducted in November 2011. During this meeting and through subsequent conversations with WPAFB personnel, and from review of existing data, the following environmental resources and issues were discussed:

- Air Quality
- Biological Resources
- Cultural Resources
- Geology and Soils
- Hazardous Materials and Waste/Environmental Restoration
- Land Use
- Noise and Air Installation Compatible Use Zone Program
- Occupational Safety and Health
- Socioeconomics and Environmental Justice
- Transportation and Infrastructure
- Visual Resources
- Water Resources

The resources or issues identified as potentially affected by the Proposed Action or alternatives are air quality, biological resources, cultural resources, geology and soils, hazardous materials and waste, environmental restoration sites, occupational safety and health, transportation and infrastructure, and water resources. These resources are described in Chapter 3, *Affected Environment*, and the potential impacts to these resources and any necessary mitigation measures are evaluated in Chapter 4, *Environmental Consequences*.

Resources not in the project area or not affected by the Proposed Action or alternatives are not described in detail in Chapters 3 or 4. As determined through the scoping process with WPAFB staff and consultation with agencies, the issues not evaluated in detail are land use, noise, socioeconomics and environmental justice, and visual resources. Table 3-1 at the beginning of Chapter 3 provides the rationale for excluding detailed analysis of these issues.

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## **DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES**

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## 2.0 DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

This chapter describes the Proposed Action and alternatives considered for relocating and consolidating the CE operations, including the No Action Alternative. The No Action Alternative is the baseline to which the Proposed Action and other alternatives are compared.

The Air Force must analyze a reasonable range of alternatives to the Proposed Action. Reasonable alternatives are those considered feasible or practical to implement from a technical, environmental, and economic standpoint, and for the most part, meet the purpose and need for the project. In accordance with 32 CFR 989.8(c), developing selection criteria is an effective mechanism for identifying, comparing, and evaluating reasonable alternatives. Criteria are developed consistent with the purpose and need for the action and to address pertinent environmental, safety, and health factors. The criteria used to identify reasonable alternatives and locations for evaluation in this EA included:

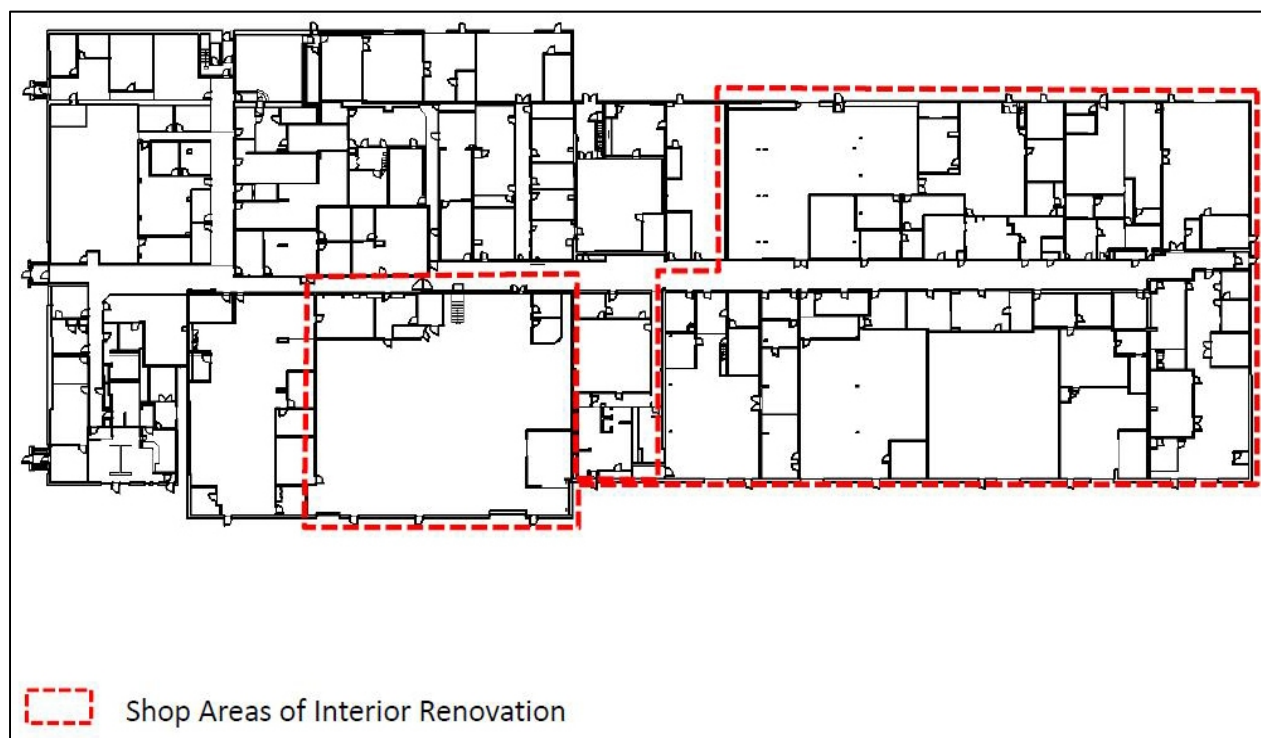
**Adequate Space and Infrastructure to Accommodate Relocated Facilities.** The site should provide adequate developable land to accommodate the project. The site should accommodate the recommended footprint or square footage necessary to supplement or replace civil engineer facilities that are currently inadequate or substandard. The site should also provide safe and efficient connectivity to existing infrastructure and avoid known areas of environmental regulatory concern.

**Compatible with the WPAFB General Plan.** The site should be compatible with long-range development plans of the Base and consider the functional relationships that support the WPAFB missions.

### 2.1 Proposed Action

The Proposed Action would consolidate CE operations in Areas A and B of WPAFB. In Area A, the consolidation would consist of interior renovations of CE shops located in F/30022. The interior renovations would allow for reorganization of the existing operations located in the building and make room to relocate the CE shops and operations from adjacent buildings (F/30017, F/30021, and F/30029). Facility 30017 is used for generators and associated parts, and F/30029 and F/30021 have the metal/electrical shops and store equipment including riding lawn mowers. Two of the adjacent buildings (F/30017 and F/30021) would be demolished at some time in the future after vacated as part of the Proposed Action. Facility 30029 would be partially demolished; the center portion of the building consisting of steel construction would remain in place. Figure 2-1 shows the interior renovations of F/30022.

The Proposed Action would also relocate CE grounds and maintenance operations in Area B from F/20745 to F/20614. Facility 20745 is a u-shaped, concrete block building of approximately 32,745 sq. ft. that has reached its life-cycle due to age, structural damage, and failing roof system. The building and foundations would be demolished after equipment is relocated to F/20614. The utilities (electric, water, and sewer) would be disconnected and removed to the nearest point of connection or capped at five feet outside the building before demolition. The salt barn and gravel bins near F/20745 (see Figure 2-2) would continue to be used from their current location but may be relocated near F/20614 at a later date. The outdoor equipment storage yard would be vacated but remain in place.

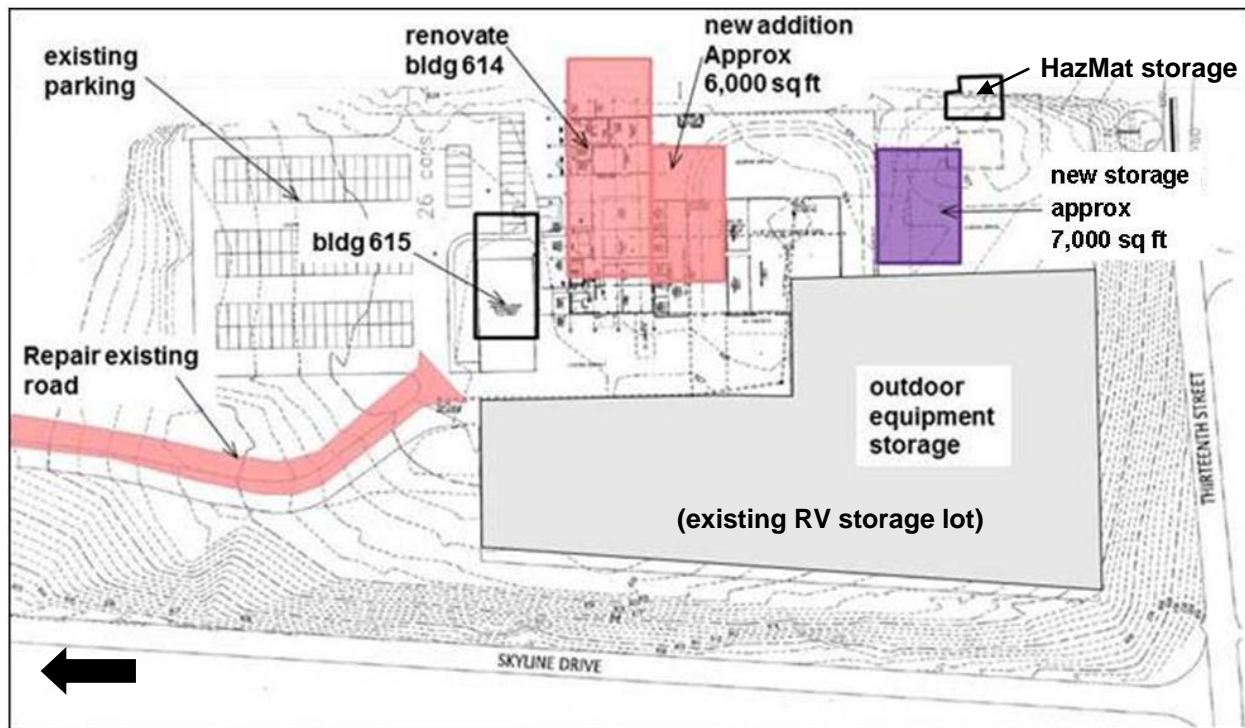


**Figure 2-1: Facility 30022 Interior Renovations**



**Figure 2-2: Facility 20745 Site Plan**

Facility 20614 would be renovated and expanded by 6,000 sq. ft. to accommodate CE operations, staff, and equipment to be relocated from F/20745. A new 7,000 sq. ft. storage facility for grounds maintenance equipment would be constructed on the existing lot and the existing RV Storage Lot would be vacated and used as outdoor equipment storage (see Figure 2-3). Metal materials would be used to construct the building addition and new storage facility. Functions relocated from F/20745 to F/20614 include the Civil Engineer Operations Flight, Horizontal Maintenance Element (CEOH) grounds shop area and maintenance equipment. The existing hazardous materials storage area near F/20614 would remain in place.



**Figure 2-3: Facility 20614 Site Plan**

An existing paved roadway provides access to F/20614 from Skyline Drive. This access would be repaved to provide adequate passage for the larger and heavier CE equipment, including tractors and trucks that would be relocated to this area.

West of F/20614 is the RV Storage Lot that would be relocated to the existing outdoor equipment storage yard south of F/20745 (see Figure 2-2). The outdoor storage yard at F/20745 would be vacated with the relocation of functions and equipment to F/20614. The RV Storage Lot vacated at F/20614 would be used for outdoor equipment storage and parking for government and private vehicles. The storage lot at F/20745 is already disturbed ground with adequate space to accommodate the existing capacity of RVs.

## 2.2 RV Storage Alternative

An alternative to the Proposed Action would leave the RV Storage Lot in its existing location west of F/20614 (see Figure 2-3) instead of relocating the RVs to the vacated outdoor equipment storage yard next to F/20745 (see Figure 2-2). This alternative would leave CEOH grounds and maintenance

equipment at F/20745 while CEOH personnel and functions would relocate and consolidate with other CE operations at F/20614.

## 2.3 No Action Alternative

The No Action Alternative is the baseline to which the impacts of other alternatives are compared. The CEQ and Air Force regulations implementing NEPA require the evaluation of taking no action to allow decision makers to compare the impacts of approving or not approving the project. The No Action Alternative may not meet the purpose and need for the project, but must be described and analyzed in the EA.

Under the No Action Alternative, the CE consolidation project would not be implemented and the RV storage area would not be relocated. The condition of F/20745 would continue to decline making it difficult and costly for Base personnel to operate from this location. There would be no interior renovations to F/30022 and conditions would remain as they are today for Base personnel. The No Action Alternative would include a continuation of RV storage west of F/20614.

## 2.4 Alternatives Eliminated from Analysis

Alternatives were evaluated against the purpose and need for the CE consolidation and on the ability to meet the selection criteria described at the beginning of this chapter. The alternatives were also evaluated against pertinent environmental, safety, and health factors. Alternatives that did not meet the purpose and need for the project, did not accommodate most site selection criteria, or resulted in a fatal flaw because of environmental, safety, or health factors were eliminated from further consideration and analysis of impacts.

There were no other locations available or evaluated to relocate the CE operations, since only locations where there are current CE operations were evaluated. Other locations in Areas A and B of the Base were evaluated separately for siting the RV Storage Lot. Criteria used by 88 ABW/CE to site a new RV storage location included compatibility with the WPAFB General Plan, sufficient space available to meet current capacity with additional room for future growth, minimal site preparation requirements, and minimal traffic and access issues.

Other sites evaluated for RV storage were eliminated for different reasons. In Area B, the sites evaluated included the Tillman Pit, Lot 31B, outside gate 1B, near Hanger 4, and the west ramp adjacent to the building 4048/4051 complex. In Area A the sites included Building 89, Building 70, and Landfill 9. The reasons for eliminating these sites varied but were mostly issues with the topography. Irregular slope created conflicts for RVs and trailers and the design of the lot restricted the most efficient layout for RV parking. For several alternatives, site preparation requirements were extensive and included issues like potential environmental contamination, deteriorated pavement, or the capacity was insufficient to relieve the existing backlog for additional storage capacity.

## 2.5 Summary of Impacts by Alternative

Table 2-1 compares the potential impacts of resources by alternative. The information summarized in the table is from Chapters 3 and 4.

**Table 2-1: Summary of Impacts by Alternative**

<b>Resource</b>	<b>Proposed Action</b>	<b>Alternative</b>	<b>No Action</b>
<b>Air Quality</b>	Short-term increases in fugitive dust and construction equipment emissions during construction; conforms to PM2.5 State Implementation Plan; no impact on ozone maintenance status	Same as Proposed Action	No impact
<b>Biological Resources</b>	No effect to listed species; disturbance to improved/landscaped grounds; no impact to suitable wildlife habitat	Same as Proposed Action	No impact
<b>Cultural Resources</b>	No adverse impact on cultural resources	Same as Proposed Action	No impact
<b>Environmental Justice, Protection of Children</b>	No impact	No impact	No impact
<b>Geology and Soils</b>	No impact	No impact	No impact
<b>Hazardous Materials and Waste</b>	Asbestos-containing materials and lead-based paint would require appropriate abatement; minor amounts of hazardous waste generated during construction and hazardous materials used during operation would be handled in accordance with site policies; consult with Ohio Environmental Protection Agency to identify any mitigation actions necessary to maintain integrity of adjacent earthfill disposal zone prior to construction	Same as Proposed Action	No impact
<b>Land Use</b>	No impact	No impact	No impact
<b>Noise</b>	No impact	No impact	No impact
<b>Health and Safety</b>	Adherence to standards would prevent risks to safety or health	Same as Proposed Action	No impact
<b>Socioeconomics</b>	No impact	No impact	No impact
<b>Transportation and Infrastructure</b>	Temporary increases in construction traffic; no impact to traffic/transportation system; no impact to utility infrastructure	Similar to Proposed Action	No impact
<b>Water Resources</b>	No impact to floodplain, groundwater, or surface water	Same as Proposed Action	No impact
<b>Visual Resources</b>	No impact	No impact	No impact

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## **AFFECTED ENVIRONMENT**

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### 3.0 AFFECTED ENVIRONMENT

This chapter describes the existing environment in the project area. The project area is the proposed locations for consolidation of the Civil Engineer operations including F/30022, F/20614, and F/20745, and the surrounding areas that would likely be affected by the project. The existing environmental conditions serve as a baseline for identifying and evaluating potential environmental changes attributable to the Proposed Action and alternative.

Following CEQ regulations and guidelines, and Air Force EIAP regulations, the description of the affected environment focuses on those environmental, social, and economic resources and issues potentially subject to impacts. The scope of the environmental analysis, as discussed in Section 1.4, identified resources for detailed evaluation; those affected resources are described in this chapter. Although all resource areas and issues were initially considered, some were eliminated from detailed examination because they were not in the project area or not affected by the Proposed Action or alternatives. The resources not evaluated and the rationale for excluding them are provided in Table 3-1.

**Table 3-1: Resources Not Analyzed in Detail**

Resource	Justification
Environmental Justice, Protection of Children	Wright-Patterson AFB must identify and address disproportionately high and adverse effects of projects on the health or environment of minority and low-income populations (Executive Order 12898) and disproportionately high and adverse human health or environmental effects of its activities on children (Executive Order 13045). Consolidation of the Civil Engineer operations would occur entirely within the boundaries of WPAFB and would not cause any unmitigated adverse effects. Therefore, any low income or minority populations or children that may reside outside the boundaries of WPAFB would not be disproportionately or adversely affected by the Proposed Action or alternatives.
Geology and Soils	There are no unique geological features in the project area. Interior renovations to F/30022 would not impact surface or subsurface soils. The addition to F/20614 and new storage facility would be constructed on existing pavement, requiring only minor grading and compacting of disturbed surfaces. The outdoor storage lot at F/20745 is already disturbed ground and would not be altered or graded for RV storage. After demolition of F/20745, the site would be graded and seeded to grass and would not impact surface or subsurface soils.
Land Use	Facilities 30022 and 20614 are surrounded by occupied buildings located in the developed parts of Area A and Area B, respectively. The project sites are existing buildings or occupied by parking lots, landscaping, and sidewalks. The land uses for the Proposed Action and alternatives are consistent with the General Plan and compatible with existing and future uses.
Noise	Consolidation of CE operations would not increase noise levels at the proposed locations or surrounding area. Since the operations are only being relocated, no new employees would be added to F/30022 or F/20614 and no additional traffic would be added to the area. Expansion of F/20614 in the developed part of Area B would not introduce any new sources of noise.
Socioeconomic	Socioeconomic factors describe the local economy, employment, and demographics that may be influenced by the Proposed Action. There would be no changes to the local economy, employment, and demographics, and no construction-related or operation-related gains for employment and the economy.

Resource	Justification
Visual	Renovations to F/30022 would be internal, causing no change in physical appearance to the building or the surrounding area. Facility 20614 is located in the developed part of Area B surrounded by occupied buildings. The design of the addition to F/20614 and the new storage facility would be compatible with the existing building. Facility 20745 would remain the same until the building is demolished at which point the site would be graded and seeded to grass. There is no unique visual quality of the surrounding areas affected by implementing the CE consolidation project.

## 3.1 Air Quality

### 3.1.1 Definition of Resource

The National Ambient Air Quality Standards (NAAQS), established by the U.S. Environmental Protection Agency (EPA) and adopted by Ohio EPA Division of Air Pollution Control, define maximum allowable concentrations of pollutants that may be reached but not exceeded within a given time period. Standards were selected to protect human health with a reasonable margin of safety. The ambient standards are for the criteria pollutants of carbon monoxide, nitrogen dioxide, ozone, lead, particulate matter (PM), and sulfur dioxide. Particulate matter is further defined by size – less than 10 microns (or micrometers) in diameter (PM<sub>10</sub>) and smaller than 2.5 microns in diameter (PM<sub>2.5</sub>). While ozone is a regulated pollutant, it is not emitted directly from sources but is formed by a combination of nitrogen oxides and volatile organic compounds reacting with sunlight in the atmosphere. Exceeding concentration levels within a given time period is a violation of the NAAQS and constitutes nonattainment of the criteria. A federally enforceable State Implementation Plan (SIP) is required for areas of nonattainment and an EPA approved maintenance plan is required when an area is reclassified from nonattainment to attainment.

### 3.1.2 Existing Conditions

#### Climate

The climate in this region of Ohio is continental, characterized by a relatively large range of seasonal variability with cold winters and warm, humid summers. Climate data from a weather station in Greene County show January is the coldest month with a normal mean temperature of 28 degrees Fahrenheit (°F) and July is the warmest month with a normal mean temperature of 73°F (MRCC, 2011a). Average annual precipitation is 40 inches with February the driest month and May the wettest (MRCC, 2011b).

#### Local Air Quality

Wright-Patterson AFB is located in the Dayton-Springfield Air Quality Control Region, which is in attainment of the NAAQS except for the annual PM<sub>2.5</sub> standard (EPA, 2012). The EPA recently took final action “determining that the Dayton-Springfield area has attained the 1997 annual average PM<sub>2.5</sub> (NAAQS) under the Clean Air Act” effective October 14, 2011 (Federal Register, 2011). However, this action does not constitute a redesignation to attainment nor does it involve acceptance of the State’s maintenance plan. The SIP for PM<sub>2.5</sub> was revised in 2010 and remains in effect, although some obligations under the SIP are suspended by this most recent EPA action. The area is currently in attainment of the 8-hour ozone standard with a maintenance plan in effect until 2017.

## Emissions at Installation

Wright-Patterson AFB is classified as a major source of air pollution under Title V of the Clean Air Act. A major source has the potential to emit more than 100 tons per year (tpy) of any one criteria pollutant, 10 tpy of a hazardous air pollutant, or 25 tpy of any combination of hazardous air pollutants. Wright-Patterson AFB operates several hundred air emission sources, listed as both insignificant and significant sources in the Title V permit. A renewal application submitted in July 2008 is still pending (Erdei, 2012).

Wright-Patterson AFB reports greenhouse gas emissions. In 2011, direct greenhouse gas emissions from onsite combustion or release totaled 143,156 metric tons carbon dioxide equivalent, which was mostly from the coal boilers (WPAFB, 2011d).

## 3.2 Biological Resources

### 3.2.1 Definition of Resource

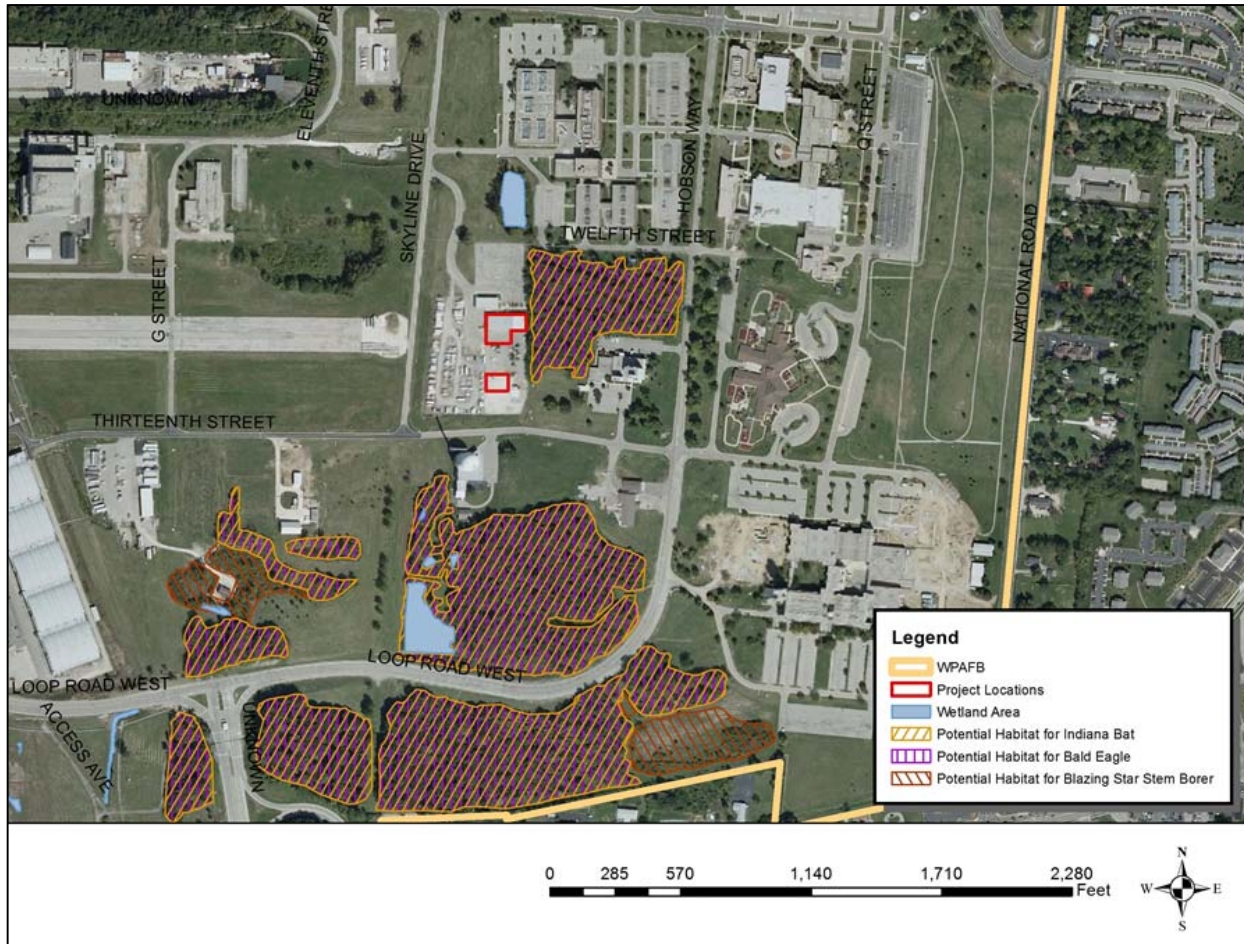
Biological resources include native or naturalized plants and animals and the habitats, such as wetlands, woodlands, and grasslands in which they exist. Sensitive and protected biological resources include plant and animal species listed as threatened or endangered by the U.S. Fish and Wildlife Service (USFWS) or by the Ohio Department of Natural Resources.

### 3.2.2 Existing Conditions

Four federally listed endangered species are known to occur on WPAFB, including the Indiana bat (*Myotis sodalis*), clubshell mussel (*Pleurobema clava*), snuffbox mussel (*Epioblasma triquerta*), and rayed bean mussel (*Villosa fabalis*). The eastern massasauga rattlesnake (*Sistrurus catenatus catenatus*), a federal candidate species, may also occur on WPAFB. Based on the Integrated Natural Resources Management Plan (WPAFB, 2007) and a review of the February 2012 list of protected species for Greene and Montgomery counties (USFWS, 2012), no other threatened, endangered, proposed, or candidate species are known to occur in the project areas. No critical habitat has been designated or proposed for WPAFB. A search of the Biodiversity Database maintained by the Ohio Department of Natural Resources indicated the Indiana bat (federal endangered, state endangered) and eastern massasauga rattlesnake (federal candidate, state endangered) have occurred within a one-mile radius of the project areas.

Although the bald eagle (*Haliaeetus leucocephalus*) is no longer listed as a federal endangered species, it receives special protection under other federal laws including the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act. Bald eagles could potentially roost in any suitable tree on WPAFB but most likely would be found near open water bodies. Although there are no records of bald eagles nesting on WPAFB, a pair of eagles began nesting near the Mad River in 2009 at the City of Dayton well field west of Harshman Road. That nest site is over 3 miles west of the nearest CE facilities.

Facilities 20614 and 20754 are located within paved areas of shops and vehicle parking and storage lots (see Figures 3-1 and 3-2). The area to the west of F/20614 is wooded and designated by WPAFB as “unimproved grounds” where the vegetation is left natural. The area surrounding F/20745 is designated unimproved grounds where the vegetation is infrequently mowed or trimmed. Because of the dense trees west of F/20614 and south of F/20745, these areas may be potential habitat for the Indiana bat and bald eagle.



**Figure 3-1: Biological Resources Near Facility 20614**

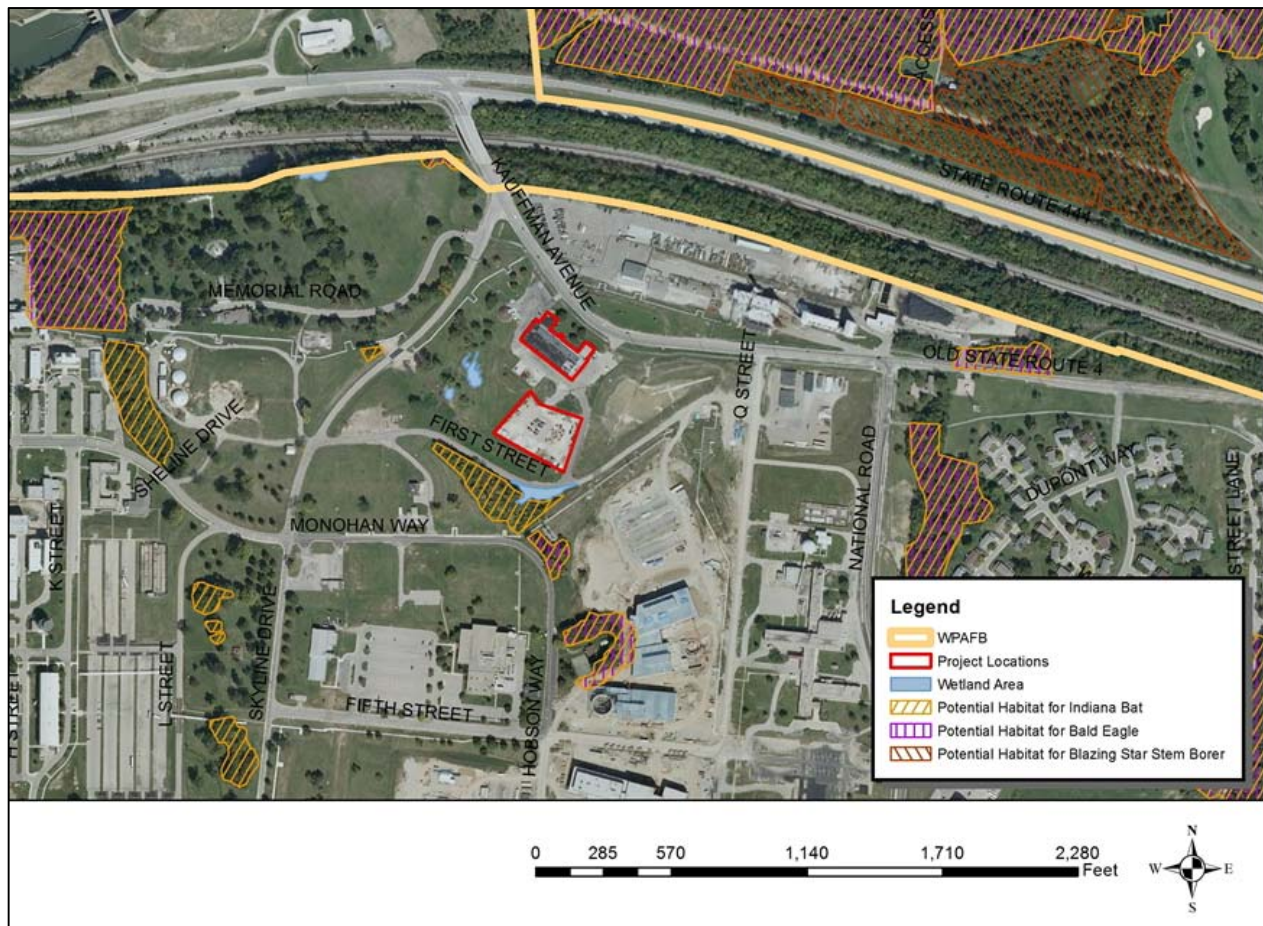
The maintained lawns and landscaping around the facilities may provide feeding and nesting sites for urban wildlife, such as the eastern fox squirrel (*Sciurus carolinensis*), eastern chipmunk (*Tamias striatus*), deer mouse (*Peromyscus maniculata*), and songbirds, such as sparrows, meadowlarks, mourning doves, and robins.

### 3.3 Cultural Resources

#### 3.3.1 Definition of Resource

Cultural resources are defined as properties that possess significant information in areas relating to archaeology, architecture, engineering, history, and culture. Cultural resources can be prehistoric or historic sites where physical evidence gives clues to human activity. Archaeological resources are often related to Native American activity and burial customs. Architectural resources refer to the buildings, structures, landscapes, and objects that are of aesthetic and/or historical significance.





**Figure 3-2: Biological Resources Near Facility 20745**

Authorized by the National Historic Preservation Act of 1966, the National Register of Historic Places provides the standards and methods for identifying and evaluating cultural resources by age, integrity, and significance. A property must maintain an adequate level of historical integrity for inclusion in the National Register. Some level of integrity must be present in terms of location, design, setting, materials, workmanship, association, and feeling. A minimum 50-year threshold is required for properties considered to be of historic age.

### **3.3.2 Existing Conditions**

Wright-Patterson AFB has participated in ongoing compliance with Section 110 of the National Historic Preservation Act by identifying and evaluating cultural resources as part of the Integrated Cultural Resources Management Plan (ICRMP).

Wright-Patterson AFB has worked closely with and received concurrence from the Ohio State Historic Preservation Office (SHPO) in updating the ICRMP. As new undertakings, construction projects, and ground disturbances are proposed, the cultural resources inventory within the ICRMP is referenced to minimize or avoid adverse effects to identified resources in accordance with Section 106 of the National Historic Preservation Act.

Numerous cultural resources are located on WPAFB, including at least 256 eligible and/or contributing historic buildings, 17 identified prehistoric sites, 17 historical sites, 5 historic landscapes, and 3 historic districts.

Wright-Patterson AFB has a rich history in aviation and military innovation. As buildings at WPAFB reach the 50-year mark, their integrity and significance for eligibility for the National Register are evaluated. Wright-Patterson AFB has evaluated all facilities constructed before 1962 and is in the process of evaluating facilities constructed between 1962 and 1966. Facilities at WPAFB that are directly associated with national efforts throughout the Cold War are given special consideration to identify those properties that have achieved significance within the past 50 years. Currently, there are 17 facilities identified as individually eligible for the National Register for Cold War Significance.

### **3.4 Hazardous Materials and Waste Management**

#### **3.4.1 Definition of Resource**

In general, both hazardous materials and wastes are substances that, if released or improperly managed, may present a danger to public health or safety or to the environment because of their quantity, concentration, or characteristics.

#### **3.4.2 Existing Conditions**

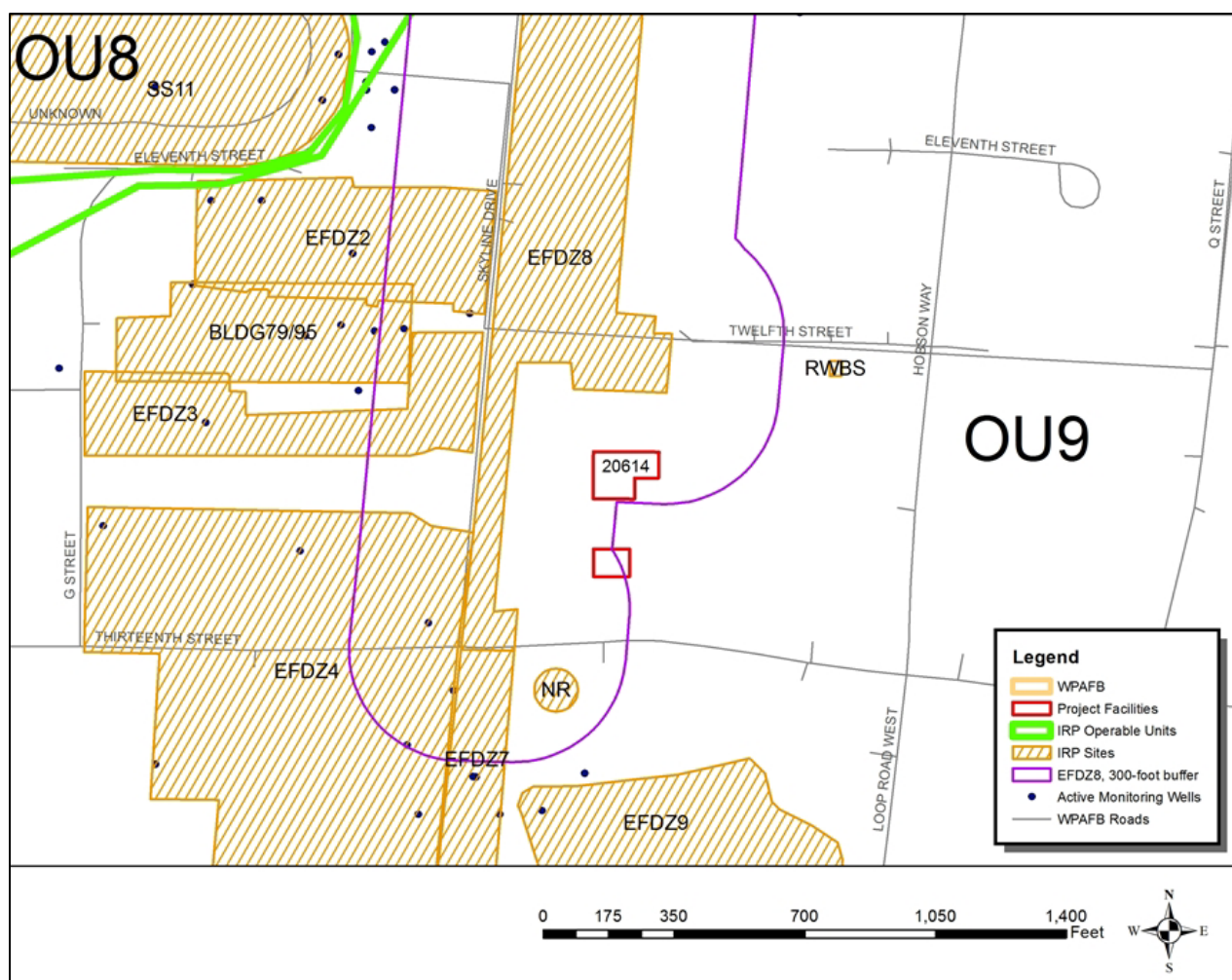
The 88 ABW/CE maintains a Hazardous Waste Management Plan that prescribes the roles and responsibilities of WPAFB staff for hazardous waste inventory, analysis, procedures, training, emergency response, and pollution prevention. The plan establishes the procedures to comply with applicable federal, state, and local regulations for hazardous waste management.

The Environmental Restoration Program requires WPAFB to identify, investigate, and clean up hazardous waste disposal or release sites. Wright-Patterson AFB entered into a Consent Order with the Ohio EPA and placed on the National Priorities List in 1989. Confirmed or suspected sites requiring investigation and characterization are grouped into 11 geographically based operable units (OUs).

Facility 20614 is within OU9, which is a collection of 11 discrete sites. Nine of these sites were used to dispose earthfill materials. Earthfill disposal zones (EFDZs) 2 through 10 were included in OU9 because of the potential for disposal of hazardous chemical materials during or subsequent to fill placement. Figure 3-3 shows the location of OU9 in reference to F/20614. The proposed addition and new storage area fall within the 300-foot buffer of EFDZ 8, which is just north of F/20614. This EFDZ is subject to use restrictions. Digging, construction, or other soil disturbance is allowable after approval by WPAFB environmental restoration staff and Ohio EPA.

Facility 30022 falls within OU2, but the CE consolidation would consist of interior renovations and would not impact areas outside the building. Facility 20745 is located outside of OU9 and is not within any buffer of an EFDZ.

AFI 32-1052, *Facility Asbestos Management* (March 22, 1994) incorporates by reference applicable regulatory requirements on asbestos management and requires bases to develop an Asbestos Management Plan to maintain a permanent record of the status and condition of asbestos-containing materials (ACM) in installation facilities. The 88 ABW/CE staff has developed standard contract specifications for the removal and disposal of regulated ACM.



**Figure 3-3: OU9 Sites Near Facility 20614**

The *Air Force Policy and Guidance on Lead-Based Paint in Facilities* (April 2, 1993) establishes lead-based paint management processes at Air Force installations for identifying, evaluating, managing, and abating lead-based paint hazards. More than 95 percent of existing WPAFB facilities were constructed prior to 1980 and likely contain lead-based paint, although the concentrations are generally below action thresholds. However, it is assumed that lead exists in all buildings until sampled and tested.

Various types of solid wastes are generated by the numerous tenants and organizations located at WPAFB. Solid wastes generally include household trash, office products and trash, packing materials, and construction debris. The project facilities generate solid waste from Civil Engineer and administration functions and from maintenance operations. After recycling efforts are applied, approximately 50 to 75 percent of the municipal solid waste generated at WPAFB is disposed mostly via landfill with a small fraction incinerated. Solid waste accumulated in containers is hauled by contractor to an off Base landfill (Stony Hollow Landfill) in Dayton.



## **3.5 Health and Safety**

### **3.5.1 Definition of Resource**

Risks to health and safety of workers and the public can include construction hazards, physical and chemical hazards, radiation, explosives, and bird and wildlife hazards to aircraft. Necessary elements for an accident or environmental risk include the presence of the hazard itself together with an exposed population. For non-chemical hazards, the degree of exposure depends primarily on the proximity of the hazard to the population. The Occupational Safety and Health Act (OSHA) is the guiding legislation for protection of workers.

### **3.5.2 Existing Conditions**

The Bioenvironmental Engineering Flight and Base Safety is responsible for implementing Air Force Occupation Safety and Health (AFOSH) standards for WPAFB military personnel and civilian employees. Some programs AFOSH addresses includes hazard abatement, hazard communication, training, personal protective equipment, and other controls to ensure that occupational exposures to hazardous agents do not adversely affect health and safety.

Construction site safety is largely measured by adherence to regulatory requirements imposed for the benefit of employees and using practices that reduce risks of illness, injury, death, and property damage. The health and safety of onsite military and civilian workers are safeguarded by Air Force regulations (AFI 91-301, *Air Force Occupational and Environmental Safety, Fire Protection, and Health Program*, June 1, 1996) designed to ensure compliance with standards issued by OSHA and EPA. These Air Force standards specify the amount and type of training required for industrial workers, the use of protective equipment and clothing, engineering controls, and maximum exposure limits for workplace stressors. The Air Force standards also address protection from occupational noise exposure compliant with OSHA's established noise exposure standards.

Workers performing lead abatement or removing other lead disturbance are required to have a lead workers license issued by the Ohio Department of Health as defined in the Ohio Administrative Code, Chapter 3701-32.

## **3.6 Transportation and Infrastructure**

### **3.6.1 Definition of Resource**

Transportation and infrastructure consist of the systems and physical structures that enable a population in a specified area to function. The availability of infrastructure and its capacity to support growth are generally regarded as essential to economic growth of an area.

### **3.6.2 Existing Conditions**

Located in Area A, the renovation of F/30022 and the relocation of shops behind F/30022 are near the intersection of Skeel Avenue and Littrell Road. This is the current location of the 88 ABW/CE operations so traffic in this area is mostly from daily WPAFB employees. The proposed relocation from F/20745 to F/20614 is within the developed part of Area B. Facility 20745 is located along Kauffman Avenue, between Skyline Drive and 1st Street. Facility 20614 is along Skyline Drive between 12th Street and 13th Street, closer to the Hilltop Community area.



Other infrastructure includes utilities. There are existing utilities (sewer, water, electrical, gas) at F/30022, F/20745, and F/20614. There are no plans to upgrade utilities at these facilities as part of this project. The Tillman Pit property is vacant with no utilities. An electric line runs north of the property.

## **3.7 Water Resources**

### **3.7.1 Definition of Resource**

Water resources include surface water, groundwater, and floodplains. Evaluation of water resources examines the quantity and quality of the resource and demand for it for various purposes.

### **3.7.2 Existing Conditions**

The Mad River is the primary surface water resource on WPAFB. The Mad River and its tributaries Hebble Creek, Trout Creek, and Mud Run, and the four lakes on WPAFB provide recreational value for canoeing, hunting, and fishing, and habitat for plants and wildlife. In Area A, surface water drains toward Hebble Creek, Trout Creek, Mud Run, and several unnamed secondary tributaries. Area B is drained by an unnamed tributary and storm water drains, which empty into the Mad River. (WPAFB, 2007a)

Wright-Patterson AFB has a Storm Water Pollution Prevention Team to manage storm water issues and prevent pollution. The Base implements a Storm Water Management Plan, a base-wide Storm Water Pollution Prevention Plan (SWP3), and construction site-specific SWP3s to comply with applicable federal and state regulations.

Groundwater resources in southwestern Ohio are among the best and most productive in the State. The water table aquifer in the area of WPAFB is part of the Great Miami/Little Miami Buried Valley Aquifer System (WPAFB, 2007a). Groundwater flow in and around Area A of WPAFB is much like the surface water drainage basin, which mostly follows the tributaries to the Mad River. A bedrock ridge creates the groundwater flow pattern through Area B that trends northwest from the southeast corner of Area B to Huffman Dam (WPAFB, 2007a). Groundwater in Area B occurs at depths ranging from just below the surface to 35 feet below ground surface (WPAFB, 2007a). Groundwater monitoring data is collected to evaluate the trends in the organic and inorganic chemicals of concern in the groundwater and to evaluate the progress of ongoing remedial actions throughout WPAFB. The IRP is committed to restoring environmental quality where groundwater resources have been impacted by contaminant migration.

There are no surface water features near the project facilities. Facility 30022 is located within the 100-year floodplain of the Mad River. Facilities 20745 and 20614 are not within the floodplain.

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## **ENVIRONMENTAL CONSEQUENCES**

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## 4.0 ENVIRONMENTAL CONSEQUENCES

This chapter presents an evaluation of the environmental consequences or impacts that might result from implementing the Proposed Action or alternatives. The specific criteria for evaluating impacts and assumptions for the analyses are presented for each resource. Evaluation criteria are generally based on federal, state, or local agency regulations and guidelines. Mitigation measures are proposed, as appropriate, to reduce potential impacts.

Impacts are defined in general terms and are qualified as adverse or beneficial, and as short-term or long-term. There may be construction-related impacts to certain resources. Such impacts are generally addressed by best management practices or permits required by federal, state, or local regulations to minimize or control the adverse effects of construction. Construction-related impacts are generally temporary, short-term, and cease after construction is complete, whereas operational impacts are generally permanent, long-term, and begin or continue after construction is complete.

### 4.1 Air Quality

#### 4.1.1 Evaluation Criteria

In attainment areas, an impact would be considered significant if the net increase in pollutants causes or contributes to a violation of the NAAQS, exposes sensitive receptors to substantially increased pollutant concentrations, or exceeds any evaluation criteria established by a SIP. In nonattainment areas, emission increases would be considered significant if they cause or contribute to a new violation of a NAAQS, increase the frequency or severity of a violation of NAAQS, or delay the attainment of any standard or other milestone contained in the SIP such that the project would not conform to the SIP.

#### 4.1.2 Proposed Action

Because WPAFB is located in a nonattainment area for PM<sub>2.5</sub> and a maintenance area for ozone, a conformity applicability analysis is required to determine whether the Proposed Action is subject to the general conformity requirements of the Clean Air Act. A conformity determination is required if the total direct and indirect emissions equal or exceed the *de minimis* threshold of the pollutant and any precursors. The *de minimis* threshold for PM<sub>2.5</sub>, ozone, and their precursors is 100 tpy (40 CFR 93.153 (b)(1) and (b)(2)).

Fuel combustion in construction equipment and worker vehicles would increase volatile organic compounds, nitrogen oxides, and carbon monoxide emissions in the short term. Due to required vehicular emission controls, these are expected to be negligible and do not warrant a detailed emissions estimation.

Air emissions would result from construction activities associated with the addition to F/20614 and the new storage facility. During the construction, expected to last seven months, particulate emissions would be generated primarily from site preparation and grading.

None of the other activities associated with the Proposed Action need be considered for the conformity applicability analysis. The existing paved roadway that provides access to F/20614 from Skyline Drive would be repaired. Off-gas from repaving all or portions of the road would be minimal and in the long-term, travel over an improved road surface would result in lower particulate matter emissions. Only interior renovations would be made to F/30022 so particulate or ozone emissions would not be an issue.

No combustible or stationary emission sources (e.g., boilers, generators) would be installed in the building addition or new storage facility at F/20614. Because the RV storage area would be moved from an existing unpaved area to another unpaved area, there would be no net change in vehicle traffic over unpaved roads and no emissions from construction activities.

Facility 20745 and the buildings adjacent to F/30022 would be demolished at a future date. Impacts resulting from the demolition of these facilities would be short-term. Particulate emissions from demolition of these structures would not reach the *de minimis* threshold level of 100 tpy for PM<sub>2.5</sub>.

Total suspended particulates resulting from construction of the addition to F/20614 and the new storage facility, and the demolition of F/20745 were calculated using the emission factor for heavy construction activity operations from AP-42 Compilation of Air Pollutant Emission Factors (EPA, 1995) to provide a conservative estimate of PM<sub>10</sub> and PM<sub>2.5</sub> emissions. The calculation assumptions and results are shown in Table 4-1.

**Table 4-1: Estimated Emissions of Particulate Matter**

Facility	Area (square feet)	Area <sup>1</sup> (acres)	Project Duration (months)	Emission Factor <sup>2, 3</sup> (tons/acre/month)	Control Efficiency <sup>4</sup> (%)	Estimated Emissions <sup>5</sup> (tons)
F/20614	13,000	0.3	7	1.2	80	0.5
F/20745 (demolition)	32,745	0.8	12	1.2	50	5.8

<sup>1</sup> The entire area for the facility is estimated, although not all of this area would actually be exposed for the entire project duration.

<sup>2</sup> Emission factor Section 13.2.3 "Heavy Construction Operations" (dated 1/95), of AP-42, "Compilation of Air Pollutant Emission Factors", 5th Edition, U.S. EPA, Research Triangle Park, NC, 1998.

<sup>3</sup> Use of this factor to estimate PM<sub>10</sub> emissions will result in conservatively high estimates; therefore, it is also conservative for PM<sub>2.5</sub>.

<sup>4</sup> Control efficiency is based on Appendix G of the BRAC Facilities and Remote Field Training Site EA (WPAFB, 2008a). Control efficiency for demolition is assumed to be lower than other construction phases.

<sup>5</sup> Total suspended particulates is a conservative estimate for PM<sub>10</sub> and PM<sub>2.5</sub>.

The conservative estimate of particulate emissions from construction and demolition of the facilities are well below the *de minimis* threshold level of 100 tpy, and therefore, the Proposed Action is assumed to conform to the SIP for PM<sub>2.5</sub>.

Fugitive dust emissions from base-wide construction activity are covered under the Title V permit as an insignificant unit and are exempt from permit requirements.

#### **4.1.3 RV Storage Alternative**

The RV storage would remain at its existing location next to F/20614 and the grounds and maintenance equipment would remain at the outdoor storage yard at F/20745. No additional construction would occur; therefore, no additional particulates from construction would be emitted other than described for the Proposed Action. Vehicle trips between F/20745 and F/20614 would increase because CEOH staff and equipment would no longer be collocated after the CE functions consolidate at F/20614. This would likely have a negligible increase in vehicle emissions but would not adversely affect ambient air quality.

#### **4.1.4 No Action Alternative**

There would be no construction or disturbance activities; therefore, no impacts to air quality would occur.

#### **4.1.5 Mitigation and Best Management Practices**

No adverse impacts to air quality are identified; therefore, mitigation measures are not necessary. However, best management practices to minimize fugitive dust would be implemented. The Ohio Administrative Code requires reasonably available control measures to prevent fugitive dust from becoming airborne during construction and demolition. Control measures generally include water or chemical dust suppression. Construction contractors working on WPAFB are required to have fugitive emissions suppression plans written and implemented when construction begins (Erdei, 2012).

### **4.2 Biological Resources**

#### **4.2.1 Evaluation Criteria**

Surface disturbance from construction would affect any biological resources that are present. The extent of disturbance relative to adjacent or replacement habitat types and the importance of the resource determines the extent of the impact. The impacts on biological resources are adverse if species or habitats of high concern are negatively affected over relatively large areas, or population size or distribution of a protected species is reduced.

#### **4.2.2 Proposed Action**

The interior renovations of F/30022, the external addition and new storage facility at F/20164, and the relocation of RVs to the existing outdoor storage yard at F/20745 would not disturb any maintained lawns or landscaping adjacent to the buildings that could be providing habitat for urban wildlife.

The potential habitat for the Indiana bat and bald eagle adjacent to F/20614 and F/20745 would not be disturbed and there is no other habitat near these facilities that could support listed or candidate species that may occur on WPAFB. Therefore, WPAFB has determined the Proposed Action would not affect listed species and the USFWS has concurred with this determination. No further consultation under Section 7 of the Endangered Species Act is necessary. Correspondence between WPAFB and the USFWS is included in Appendix A.

#### **4.2.3 RV Storage Alternative**

The RV storage would remain at its existing location next to F/20614 and the grounds and maintenance equipment would remain at the outdoor storage yard at F/20745. No construction or ground disturbance is necessary other than described for the Proposed Action, and thereby no other impacts to urban wildlife, habitat, or listed species would occur.

#### **4.2.4 No Action Alternative**

There would be no construction or disturbance activities to consolidate CE operations; therefore, no impacts to biological resources would occur.

#### **4.2.5 Mitigation or Best Management Practices**

No adverse impacts to biological resources are identified and therefore no mitigation measures or best management practices are necessary.

### **4.3 Cultural Resources**

#### **4.3.1 Evaluation Criteria**

Construction work involving excavation, constructing new structures, or altering existing structures can affect cultural resources. Impacts would be considered adverse if the action includes physically altering, damaging, or destroying all or part of a resource; altering characteristics of the surrounding environment that contribute to the resource's significance; or introducing visual or audible elements that are out of character with the property or alter its setting.

An Area of Potential Effect (APE) is established to evaluate the potential impact of an undertaking on adjacent cultural resources. The APE is defined as the area in which eligible properties may be affected by the undertaking, including direct effects, such as destruction of the property, and indirect effects, such as visual or audible changes that affect the character and setting of the property (NPS, 1997). The size and shape of the APE for the Proposed Action is based on professional judgment that considers views, access, and approach to and from the project site, activities and functions associated with the undertaking, and proximity of eligible and contributing cultural resources.

#### **4.3.2 Proposed Action**

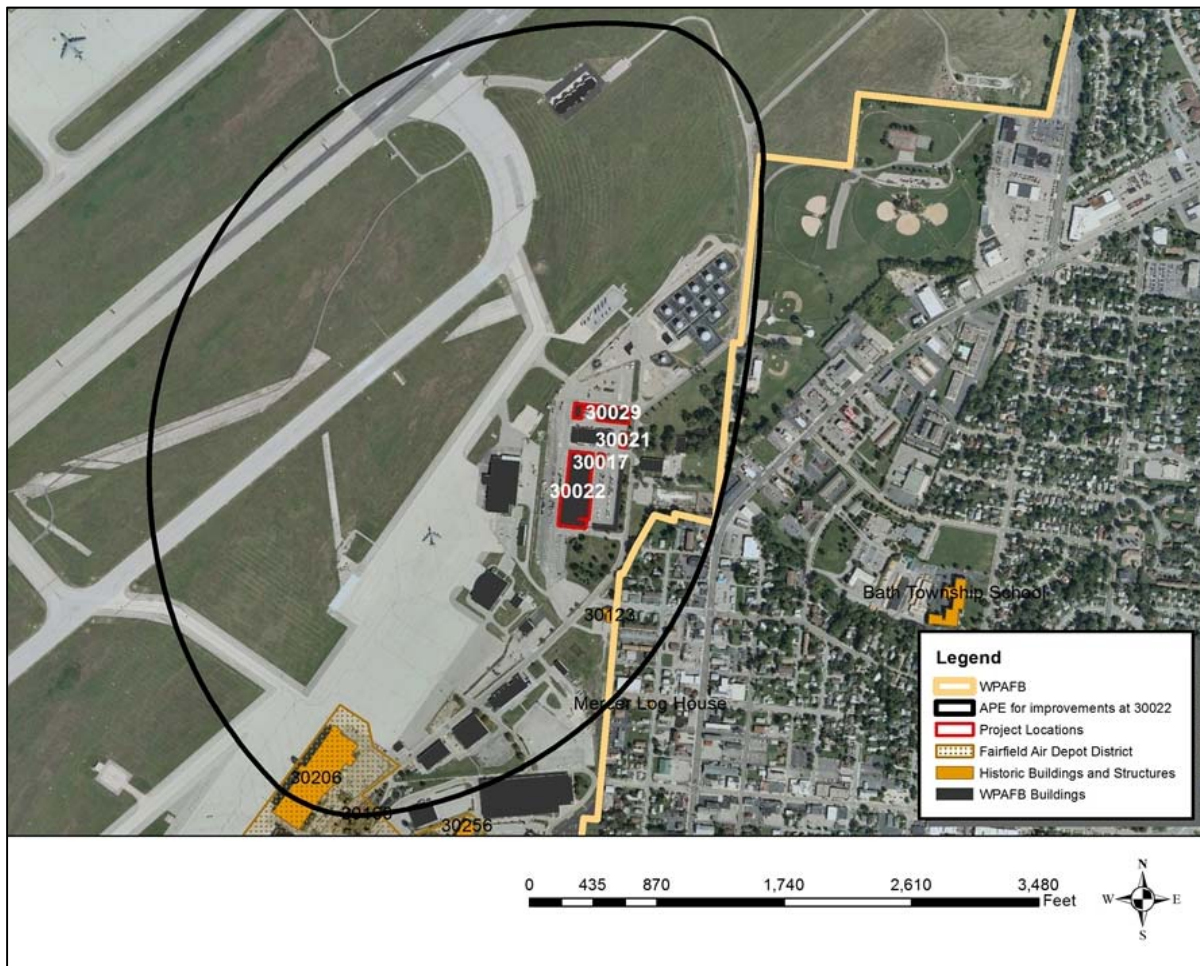
The locations of undertakings associated with the Proposed Action are not located within any historic district and no National Register listed or eligible sites, buildings, structures, or objects are within the individual APEs directly affected by ground disturbance or construction activities.

**Facility 30022:** The APE boundary measures approximately 5,000 by 3,200 feet and incorporates portions of the flight line in Area A, contributing cultural resources to the Fairfield Air Depot Historic District, and a small portion of the City of Fairborn (see Figure 4-1). Due to the high visibility of F/30022 from the flight line, the APE extends in a ½-mile radius to the west. Visibility to the east is limited by numerous structures and mature trees.

Constructed in 1943, F/30022 originally served as the Base Construction and Utilities Building. It is not historically or architecturally significant and has undergone a series of additions and alterations through the years (Labat, 2011). Additional alterations would be limited to the interior of the building. No adverse impact to the integrity or eligibility of F/30022 would occur from the interior renovation.

The Fairfield Air Depot District is located approximately 2,000 feet to the southwest of F/30022. Contributing resources to the site (F/30206 and F/30123) are visible from F/30022. Because the alterations of F/30022 are limited to the interior, current use or visual or audible characteristics of the area, or the integrity or eligibility of F/30206, F/30123, or other resources contributing to the Fairfield Air Depot District historic characteristics would not be affected. No eligible or listed archaeological sites are located within or near the APE for F/30022; therefore, no adverse impacts would occur to cultural resources at the site.





**Figure 4-1: APE Near Facility 30022 in Area A**

Facility 30017 would be demolished at some time in the future. It is a corrugated metal warehouse building constructed in 1948 and is located near F/30022. Designed as a strictly utilitarian building, F/30017 was evaluated in 1998 and determined not eligible for the National Register. Facility 30021 (see Figure 4-2) is a concrete block warehouse building constructed in 1943 and located about 200 feet to the northwest of F/30022. It was evaluated in 1996 and determined not eligible for the National Register. Constructed in 1943, F/30029 is also a utilitarian warehouse (see Figure 4-3). It is a wood frame structure clad in metal siding. F/30029 was evaluated in 1996 and determined not eligible for the National Register (Labat, 2011). No adverse impacts are expected because of demolition of these facilities.

**Facility 20745:** The APE boundary for F/20745 measures approximately 1,800 by 1,600 feet and incorporates the northern portions of Area B near Kaufman Avenue and Skyline Drive (see Figure 4-4). Views are limited by topography to the west, mature trees to the northeast, and new construction to the south.

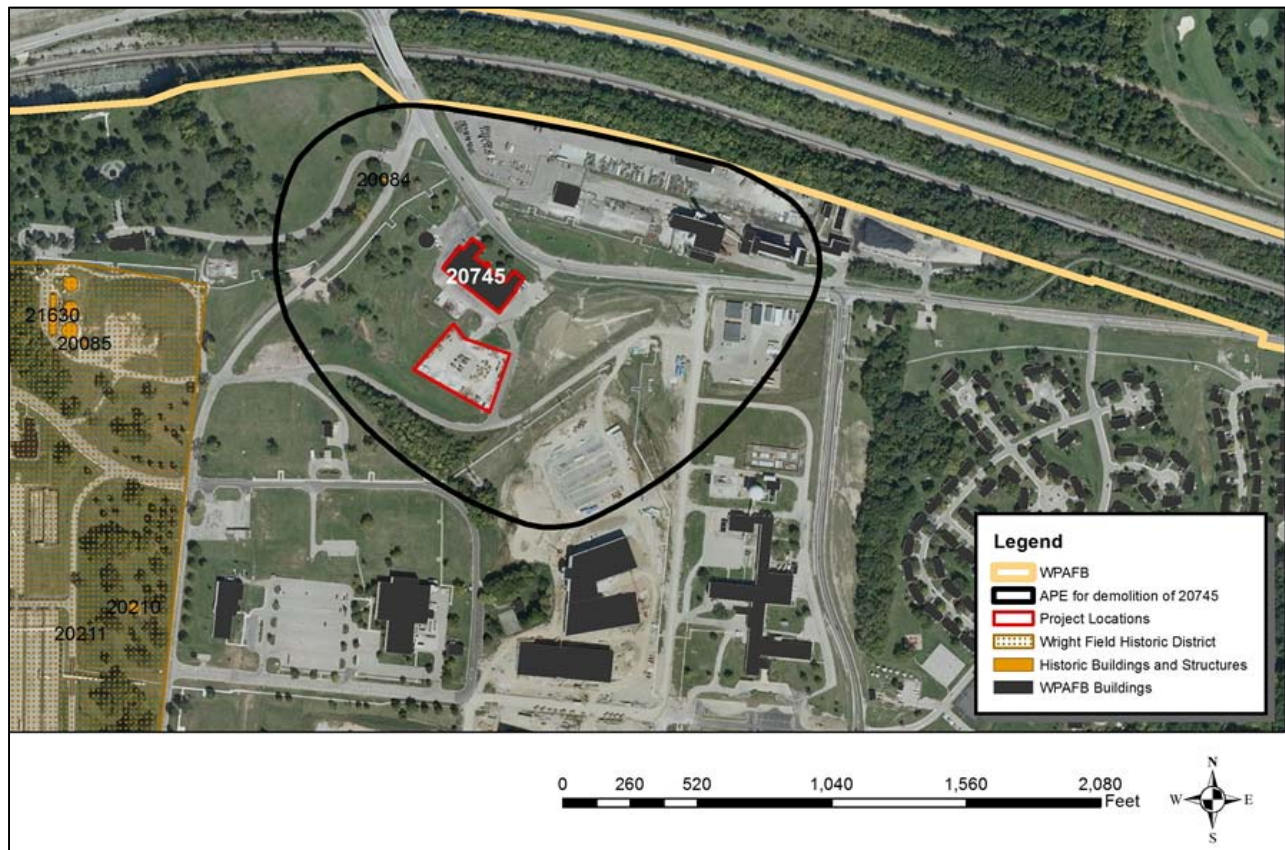


**Figure 4-2: South Facade of Facility 30021, Facing North/Northeast**



**Figure 4-3: North Facade of Facility 30029, Facing West/Southwest**





**Figure 4-4: APE Near Facility 20745 in Area B**

Only one historic building is located within the APE for F/20745. Constructed in 1945, F/20084 is a small security station (Gate 16B) located on Skyline Drive approximately 400 feet to the northwest of F/20745. Although currently not in use, F/20084 is a contributing resource to the Wright Field Historic District. The change of use described by the Proposed Action would not alter the current use or visual or audible characteristics of the area, nor would the undertaking affect the integrity or eligibility of the facility. No eligible or listed archaeological sites are located within the APE for F/20745; therefore, no adverse impacts would occur to cultural resources at the F/20745 site.

The demolition of F/20745 would be completed in the future but is considered at part of the Proposed Action. Facility 20745 in Area B is a single story utilitarian structure constructed in 1944 to serve as the Quartermaster Laundry (see Figure 4-5). It is a concrete block building with a flat roof and multiple additions. The building was evaluated for historical significance in 1996 and determined not eligible for the National Register, nor does it contribute to the Wright Field Historic District (Labat, 2011). No adverse impacts are expected because of demolition.

**Facility 20614:** The APE boundary for F/20614 considers all structures and sites within the direct viewshed of the project site resulting in a zone approximately 2,500 by 2,500 feet wide (see Figure 4-6). An APE often extends up to ½ mile, but the viewshed from the F/20614 project site is limited by topography and mature trees, resulting in an APE bounded by Loop Road to the south, Hobson Way to the east, 10th and 11th Streets to the north, and F/20004 to the west.





Figure 4-5: Southwest Façade of Facility 20745, Facing North

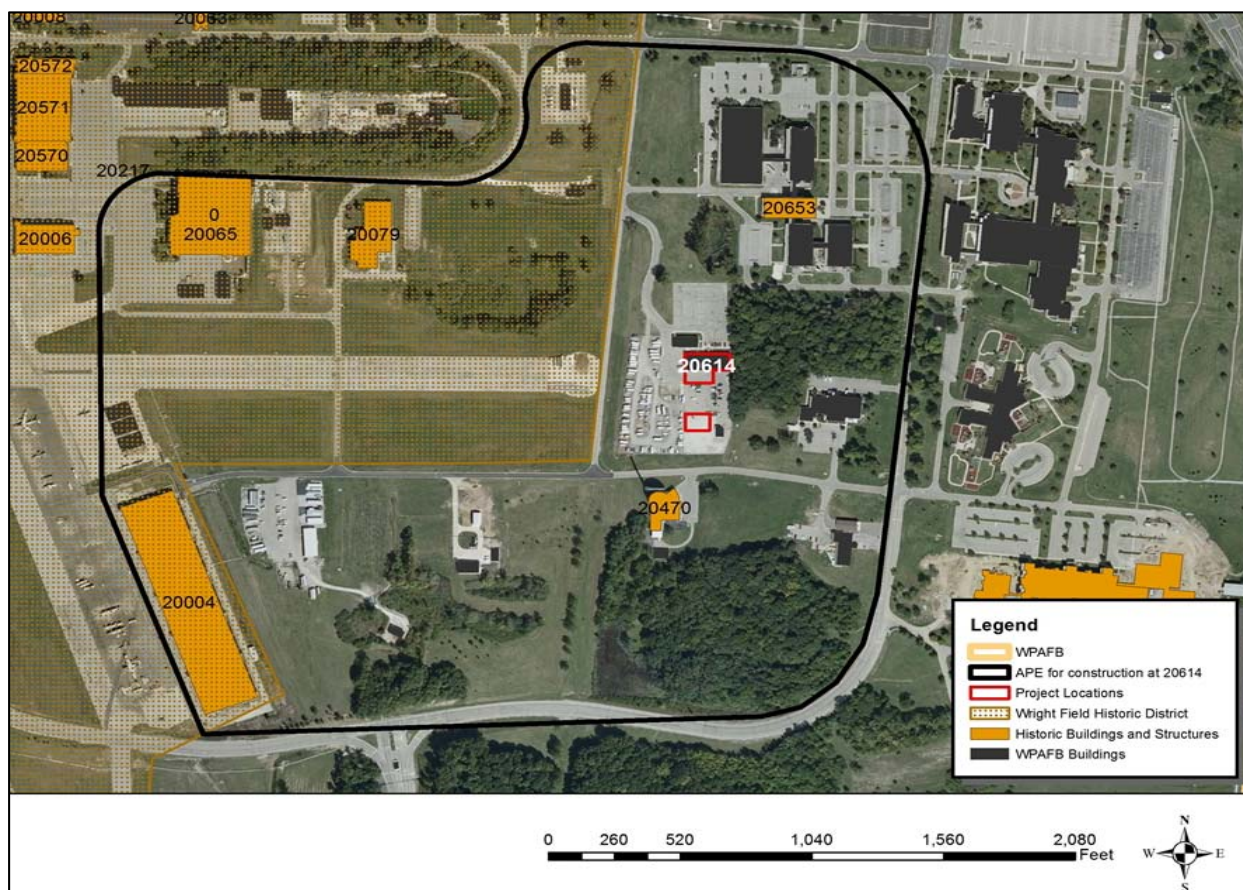


Figure 4-6: APE Near Facility 20614 in Area B

Facility 20614 would be expanded by 6,000 sq. ft. and the interior renovated to accommodate the relocation of indoor CE equipment storage. A new 7,000 sq. ft. storage facility would be constructed adjacent to F/20614. Existing paved and gravel lots would serve as parking for private and government vehicles, and CE equipment storage. Facility 20614 was constructed in 1993. It is a utilitarian structure with no historical or architectural significance; therefore, no adverse impacts would occur to F/20614.

Facility 20614 is located near the Wright Field Historic District. Three buildings (F/20004, F/20065, and F/20079) and one structure (Accelerated Runway) contributing to the District and two individually eligible buildings (F/20470 and F/20653) are located within the APE for F/20614. The Proposed Action would not alter the current use or visual or audible characteristics of the project area, nor would activities associated with the undertaking affect the integrity of Wright Field Historic District. No eligible or listed archaeological sites are located within or near the APE for F/20614; therefore, no adverse impacts would occur to cultural resources at the F/20614 site.

Non-eligible facilities directly affected by undertakings, identified eligible and contributing cultural resources located within individual APEs, and facilities to be demolished as future projects of the Proposed Action are listed in Table 4-2.

Wright-Patterson AFB consulted with the Ohio SHPO in accordance with Section 106 of the National Historic Preservation Act and in compliance with 36 CFR 800.8(a)(3) to concur with WPAFB's determination that implementing the Proposed Action would have no adverse impact on cultural resources. The SHPO concurred that the Proposed Action, including the relocation of functions to F/20614, RV storage near F/20745, demolition of F/20745, relocation of functions to F/30022, and demolition of F/30017, F/30021, and F/30029 would have no adverse effect on historic properties. Correspondence between WPAFB and SHPO is included in Appendix A.

Wright-Patterson AFB consulted with four Native American tribes (see Section 6.0) that expressed an interest in projects and activities occurring at the Base because of historic and traditional connections to the area (see Appendix A). None of the tribes responded within the allotted Section 106 consolidation timeframe.

#### **4.3.3 RV Storage Alternative**

The RV storage would remain at its existing location next to F/20614 and the grounds and maintenance equipment would remain at the outdoor storage yard at F/20745. No further construction or ground disturbance is necessary other than described for the Proposed Action, and thereby no impacts to historic properties or listed or eligible for listing on the National Register of Historic Places would occur.

#### **4.3.4 No Action Alternative**

There would be no further construction or disturbance activities for the facilities and locations described above; therefore, no impacts to cultural resources would occur.

**Table 4-2: Identified Historic Resources**

Resource Name	Common Name	Date	Associated Undertaking	National Register Status	Altered in Proposed Action?	Adverse Impact?
F20004	Modification Hangar & Flight Research	1944	Changes to F/20614	individually eligible, WF	no	no
F20065	Static Test Building	1944		individually eligible, WF	no	no
F20079	Jet Propulsion Laboratory	1944		WF	no	no
F20470	AF Nuclear Engineering Center	1960		individually eligible	no	no
F20614	BE Maintenance Shop	1993		not eligible	addition	no
F20615	BE Administration	1993		not eligible	no	no
F20612	Hazardous Materials Storage	1995		not eligible	no	no
F20653	Manufacturing Technology Laboratory	1975		individually eligible	no	no
Accelerated Runway		1942		WF	no	no
F20084	Security Sentry House	1945	Relocation of F/20745 functions	WF	no	no
F20745	Grounds and Pavement Facility	1944		not eligible	demolish	no
F30017	BE Pavement & Grounds Storage	1948	Area A Consolidation; F/30022	not eligible	demolish	no
F30021	Masonry Unit Maintenance Shop	1943		not eligible	demolish	no
F30022	CE Administration and Maintenance	1943		not eligible	interior alt.	no
F30029	Paint Shop, Storage	1943		not eligible	partially demolish	no
F30123	Locomotive Storage	1942		FAD	no	no
F30206	Air Dock	1941		individually eligible, FAD	no	no
Triangular Runways		1941-1942	RV Storage Lot	WF	no	no

#### 4.3.5 Mitigation or Best Management Practices

Although no adverse impacts to archaeological resources are expected, WPAFB is prepared to appropriately handle an inadvertent or unanticipated discovery from ground-disturbing activities. In the event of a discovery of human remains or cultural objects, any work will be halted within a 100-foot radius of the find and the WPAFB Cultural Resources Manager will be notified immediately. Wright-Patterson AFB will comply with the Native American Graves Repatriation and Protection Act and other applicable regulations to identify and treat the remains or cultural objects.

## 4.4 Hazardous Materials and Waste

### 4.4.1 Evaluation Criteria

Impacts related to hazardous materials and hazardous/nonhazardous waste management would be considered adverse if the action resulted in noncompliance with applicable federal and state regulations, or increased the amounts generated or procured beyond current WPAFB waste management procedures and capacities. Impacts on the Environmental Restoration Program would be considered adverse if the action disturbed or created contaminated sites resulting in negative effects on human health or the environment.

### 4.4.2 Proposed Action

Although contaminated shallow soil is not known to exist on any of the project locations, there is potential to encounter previously unidentified contaminated soils or groundwater during construction activities.

Small amounts of potentially hazardous materials (waste oils, lubricants, solvents) would be used with wastes generated during construction but proper use, storage, spill prevention, and disposal of the materials in accordance with Base policies would ensure no impact to workers and the environment. These policies include *Integrated Pollution Prevention, Green Procurement and Solid Waste Management Plan* (WPAFB, 2008b), *Installation HAZMAT Management Program Plan* (WPAFB, 2008c), and *Spill Prevention Control and Countermeasure Plan* (WPAFB, 2006).

After CE functions and operations consolidate at F/30022 and F/20614, the same types of hazard materials would be stored in flammable lockers and cabinets and used at the new locations as were stored and used at the vacated locations. There would be no expected increase of materials stored or used or wastes generated because no new sources or uses would be introduced. Typical hazardous materials used for CE operations include lubricants, cutting oils, paints, fuel additives, and fuel.

The Proposed Action would not involve excavation or construction within the boundaries of the sites identified within OU2 or OU9. However, construction of the facilities, primarily the addition to F/20614 and the new storage facility, would occur within the 300-foot boundary of EFDZ 8 (see Figure 3-3). To comply with the Ohio Administrative Code, the 88 ABW/CE Environmental Restoration Program staff would be required to notify and consult with the Ohio EPA and any mitigation actions they require would be implemented.

Preliminary assessment of F/30022 indicates the presence of ACM in floor tile, which would require appropriate abatement prior to demolition. There is no existing documentation showing asbestos in F/20614; however due to the age of the building, asbestos testing would be recommended before constructing the addition to the facility. Additional sampling may be conducted to determine the condition of ACM (friable or non-friable) to recommend the method of abatement, containment, and disposal. Non-friable ACM can be disposed of in a sanitary landfill but friable asbestos must be disposed of in an EPA-approved landfill. Abatement contractors must be licensed and would be responsible for obtaining required permits from Ohio EPA and Ohio Department of Health. No impact to workers or the environment is expected from ACM abatement of F/30022 and F/20614.



Before the demolition of F/20745 and the buildings adjacent to F/30022, the presence of ACM would need to be determined. Additional sampling may be conducted to determine the condition of ACM (friable or non-friable) to recommend the method of abatement, containment, and disposal. Non-friable ACM can be disposed of in a sanitary landfill but friable asbestos must be disposed of in an EPA-approved landfill. Abatement contractors must be licensed and would be responsible for obtaining required permits from Ohio EPA and Ohio Department of Health. No impact to workers or the environment is expected from ACM abatement.

There would be opportunities to recycle the building materials as part of the demolition of F/20745 and the small buildings behind F/30022. Recycling these materials would minimize the amount of construction debris going to a landfill.

Procedures specified in *Air Force Policy and Guidance on Lead-Based Paint in Facilities* (April 2, 1993) would be followed prior to demolishing these buildings to safeguard against worker and environmental impacts.

#### **4.4.3 RV Storage Alternative**

The RV storage would remain at its existing location next to F/20614 and the grounds and maintenance equipment would remain at the outdoor storage yard at F/20745. No further construction or ground disturbance is necessary other than described for the Proposed Action, and thereby no other impacts from storing, handling, and using hazardous materials or generating wastes would occur.

#### **4.4.4 No Action Alternative**

There would be no impacts under this alternative because no construction-related or operational-related hazardous materials or waste would be used or generated.

#### **4.4.5 Mitigation and Best Management Practices**

No direct adverse impacts from storage, handling, or disturbance of hazardous materials and waste are identified and therefore mitigation measures are not necessary. Best management practices would be followed, such as notifying appropriate regulatory authorities and taking necessary actions for cleanup and proper disposal should hazardous materials be spilled during construction. The *Spill Prevention Control and Countermeasure Plan* will be updated to include the new locations of hazardous materials storage locations. Should it be determined that construction of the new storage facility at F/20614 impacts the integrity of EFDZ 8, any mitigation requirements imposed by the Ohio EPA will be followed.

Demolition contractors do not require special licensing for mechanical demolition. Asbestos-containing materials and lead-based paint would require appropriate abatement. The OSHA standards for lead-based paint abatement will be followed. Workers performing lead-based paint abatement or removal are required to have a lead workers license issued by the Ohio Department of Health.

### **4.5 Health and Safety**

#### **4.5.1 Evaluation Criteria**

Actions are evaluated for the potential to jeopardize the health and safety of WPAFB personnel and the surrounding public. Impacts might arise from physical changes in the work environment, construction



activities, introduction of construction-related risks, and risks created by either direct or indirect workforce and population changes related to proposed activities such as increased traffic.

#### **4.5.2 Proposed Action**

The CE consolidation project is not of the design or operational type that would create human safety or health risks. The operations of adjacent facilities would not expose users to any unusual safety or health risks. Health and safety impacts and risks would be greatest during construction and demolition.

Heavy equipment would generate noise that could affect the onsite workers during construction. Construction equipment typically emits noise in the 80 to 120 decibel range (Spencer-ER, 2005). The construction contractor would require workers to wear hearing protection in accordance with OSHA regulations. Occupants in nearby facilities could experience short-term, intermittent muffled noise during the workday. This intermittent exposure could be a nuisance but would not pose a threat to hearing.

The 6,000 sq. ft. addition to F/20614 and the new 7,000 sq. ft. storage facility are within the 300-foot buffer of EFDZ 8. This EFDZ is subject to use restrictions. To ensure worker safety, approval for digging, construction, or other soil disturbance would be required by WPAFB Environmental Restoration Program staff and Ohio EPA.

Facilities 30022 and 20614 and facilities proposed for demolition would be tested for asbestos-containing materials or lead-based paint to determine the type of protection required before construction begins. Asbestos-containing materials and lead-based paint would require appropriate abatement. Minor amounts of hazardous waste generated during construction would be handled in accordance with site policies.

The general public has no access to the construction activities associated with the Proposed Action and therefore no impacts to public health and safety are expected.

#### **4.5.3 RV Storage Alternative**

The RV storage would remain at its existing location next to F/20614 and the grounds and maintenance equipment would remain at the outdoor storage yard at F/20745. No further construction or ground disturbance is necessary other than described for the Proposed Action, and thereby no other impacts to health and safety would occur.

#### **4.5.4 No Action Alternative**

There would be no impacts under this alternative because no construction-related or operation-related health and safety risks would occur.

#### **4.5.5 Mitigation and Best Management Practices**

Before construction at F/20614 could begin, coordination with WPAFB Environmental Restoration Program staff and Ohio EPA would be required. Best management practices would be followed, such as identifying the construction zone and prohibiting access to unauthorized individuals. Construction contractors would be responsible for complying with applicable health and safety regulations.

## **4.6 Transportation and Infrastructure**

### **4.6.1 Evaluation Criteria**

Impacts on transportation and infrastructure are evaluated for the potential to disrupt or improve existing levels of service and additional needs for utilities and transportation patterns and circulation. Impacts might arise from physical changes to circulation, construction activities, introducing construction-related traffic on local roads, changes in daily or peak-hour traffic volumes, and energy needs created by either direct or indirect workforce and population change related to Base activities.

### **4.6.2 Proposed Action**

There are no enhancements planned to the transportation system. No additional traffic would be added to the system, just a redistribution of employees from F/20745 to F/30022 and F/20614. An existing paved drive that provides access from Skyline Drive to F/20614 would be repaved to provide adequate passage for the larger and heavier CE equipment, including tractors and trucks that would be relocated to this area.

Construction activities would result in a slight increase to traffic volume in the project area due to on-road use by construction equipment, construction workforce vehicles, and vehicles delivering construction materials. The construction of the CE consolidation project would have negligible impacts to traffic at WPAFB.

The existing utilities infrastructure needed to support the CE consolidation at F/30022 and F/20614 are adequate. No utility upgrades or expansions of services are needed. When functions are relocated from F/20745 to F/20614, the utilities at F/20745 would be disconnected to reduce utility costs until the building is demolished and all utilities are capped and removed.

### **4.6.3 RV Storage Alternative**

The RV storage would remain at its existing location next to F/20614 and the grounds and maintenance equipment would remain at the outdoor storage yard at F/20745. Vehicle trips between F/20745 and F/20614 would increase because CEOH staff and equipment would no longer be collocated after the CE functions consolidate at F/20614. This would likely have a negligible increase in traffic on existing roads but would not adversely affect transportation on the Base. No further construction or ground disturbance and no alterations to the road network or utilities are necessary other than described for the Proposed Action, and thereby no other impacts to the road network or utilities would occur.

### **4.6.4 No Action Alternative**

There would be no impacts under this alternative because there would be no construction-related or operation-related change to traffic patterns and infrastructure surrounding the CE consolidation facilities.

### **4.6.5 Mitigation and Best Management Practices**

Adverse impacts to transportation and infrastructure are not expected and therefore mitigation measures are not necessary.

## **4.7 Water Resources**

### **4.7.1 Evaluation Criteria**

Evaluation criteria for impacts on water resources are based on water quality and use, existence of floodplains, and compliance with local, state, and federal regulations. An impact would be adverse if it affects water quality adversely, threatens or damages unique hydrologic characteristics, limits water supply, or violates established laws or regulations adopted to protect water resources.

### **4.7.2 Proposed Action**

Interior renovations to F/30022 in Area A would reorganize the existing CE shops and provide room for additional shops to relocate from the adjacent buildings. This would not require any ground disturbance, and therefore, groundwater and surface water run-off from this site would not change and the floodplain would not be impacted.

Excavations for the footings, foundations, and utilities at F/20614 are not expected to encounter groundwater, which may occur at depths of approximately 35 feet and greater.

Facilities 20614 and 20745 are not within the 100-year floodplain of the Mad River or the floodplain of any nearby tributaries, and there are no surface waters in the vicinity; therefore, no impacts would occur to these resources.

Operation of the relocated and consolidated CE facilities would not impact the existing WPAFB water supply source. The consolidation of operations to two locations would increase operational efficiency and lower utility usage.

Area B of WPAFB is managed as an integral part of the installation's source water protection area under a Memorandum of Agreement with the City of Dayton. As part of that agreement, the 88 ABW/CE environmental staff conducts a biennial inventory of regulated substances that are stored within the source water protection area. Special efforts are implemented to prevent the release of the pollutants to the ground. The facilities involved in the consolidation are not included within the source water protection area.

### **4.7.3 RV Storage Alternative**

The RV storage would remain at its existing location next to F/20614 and the grounds and maintenance equipment would remain at the outdoor storage yard at F/20745. No further construction or ground disturbance is necessary other than described for the Proposed Action, and thereby no other impacts to water resources would occur.

### **4.7.4 No Action Alternative**

The No Action Alternative entails no new construction or land disturbance activities for the CE consolidation project; therefore, surface water and groundwater quality and quantity would not be impacted.

#### **4.7.5 Mitigation and Best Management Practices**

Adverse impacts to water resources are not identified; therefore, mitigation measures are not necessary. Wright-Patterson AFB has both surface water and groundwater protection programs in place to ensure projects do not impact water quality (WPAFB, 2007c; WPAFB, 2011c). Although less than one acre would be disturbed at any one site, best management practices would continue to be followed, such as implementing soil erosion and siltation control measures described in the SWP3. Some of these may include installing silt fencing and straw bales around each construction site and nearby storm sewer inlets.

Generally, impacts can be avoided or minimized when proper construction techniques, erosion control measures, and structural engineering are incorporated into the project design. Erosion control measures will be implemented in accordance with the site-specific SWP3 to minimize erosion, with no significant adverse effect to water resources.

### **4.8 Cumulative Impacts**

This section describes the impacts to the environment that may potentially occur because of the additive (cumulative) effects of implementing the Proposed Action with other past, present, and reasonably foreseeable future actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over time.

Past and present actions near the proposed CE consolidation facilities included in the cumulative impact analysis are the construction and operation of the Base Realignment and Closure facilities, infrastructure upgrades, Air Force Institute of Technology Campus Master Plan, development of the Hilltop Community Services District, and installation of the Tomography Range. The foreseeable future actions include the continued expansion of the Information Technology Complex, Air Force Research Laboratory parking lot expansion, constructing a new and expanded RV Storage Lot, relocating the perimeter fence, and reconfiguring entry gates.

The Proposed Action would not affect biological resources, cultural resources, soils, land use, and safety and health beyond the boundaries of the areas proposed for the CE consolidation and the immediately adjacent areas; therefore, no cumulative impacts to these resources would occur.

Air quality in the project area is generally good, as demonstrated by the recent proposal to reclassify the area as attainment for PM<sub>2.5</sub>. Construction emissions are short-term and with adequate dust control measures during and after construction, cumulative increases in PM<sub>2.5</sub> emissions would not exceed NAAQS or affect the attainment designation in the area. Consolidating CE operations and facilities would have a beneficial cumulative impact on air quality by reducing multiple vehicle trips on Base, especially for maintenance services.

WPAFB has adequate systems and capacity to manage the small amounts of hazardous waste generated by the Proposed Action in combination with other proposed projects; therefore, no adverse cumulative impact to hazardous waste management would occur.

The utilities infrastructure and transportation network needed to support the CE consolidation would be adequate and traffic and utility usage would not change with relocated personnel and operations.

Compliance with SWP3 requirements for the Proposed Action and other projects would ensure no cumulative impacts to water quality. Once F/20745 is demolished, restoring the area and seeding to grass would help improve local water quality by reducing runoff from disturbed surfaces.

## **4.9 Irreversible or Irretrievable Commitments of Resources**

An irreversible commitment of resources can be defined as the loss of future options. Irreversible effects result primarily from consumption or destruction of a specific resource that cannot be replaced within a reasonable timeframe (minerals or soils). Irretrievable resource commitments involve the loss in value of an affected resource that cannot be restored because of the action (extinction of a threatened or endangered species or the destruction of a cultural site).

Labor, energy, materials, and capital would be committed for construction of the CE consolidation facilities. These resources are not recoverable. Construction would make permanent use of building materials; however, rare resources would not be consumed in the process. The construction materials, except to the extent they can be recycled, would be irretrievably committed.

The CE consolidation would occupy approximately 4 acres of new land for some time into the future until the operations are terminated. The approximately 2 acres of land associated with the demolition of F/20745, F/30029, F/30021, and F/30017 may be restored to their existing conditions.

Other committed resources would include water, natural gas, fossil fuels, and electricity used for the construction of the proposed facilities and for their continued operation.

## **4.10 Relationship Between Short-term Uses of the Environment and the Maintenance and Enhancement of Long-term Productivity**

Short-term use of a labor force would result in long-term productivity of the site for convenient and consolidated services. The consolidation of the civil Engineer operations would provide efficiencies for WPAFB personnel that would improve workday readiness. Short-term effects from construction activities with negligible adverse impacts, such as temporary and minor increases in traffic and noise, would provide for a long-term situation with fewer daily trips for maintenance personnel. This would result in less traffic from a Base-wide perspective.

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## **LIST OF PREPARERS**

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## 5.0 LIST OF PREPARERS

This EA was prepared by the 88 ABW/CE Asset Management Division, Planning and Real Property Section with contractual assistance from Labat Environmental, Inc. The following individuals were primarily responsible for preparing and reviewing the EA, or for providing senior level guidance and quality control.

Name	Role	Qualification
Cory Edwards	Historic Preservation Specialist Cultural Resources, GIS	M. Arch., Architecture B.S., Architecture Years of Experience: 4
Tamar Krantz	Ecologist/Biologist Air Quality, Regulatory Compliance	M.P.H., Environmental Health Sciences (Air Quality) B.A., Biology and Environmental Studies Years of Experience: 20
Kelly Maiorana	Senior Natural Resource Specialist Alternatives, Transportation, Soils	B.S., Environmental Science Years of Experience: 12
Christine Modovsky	Quality Assurance Coordinator Senior Technical Reviewer	M.S., Environmental Science B.S., Environmental Science Years of Experience: 23
Dan Moyes	Project Manager Purpose and Need, Senior Technical Reviewer	B.S., Information Systems A.A.S. Environmental Technology Years of Experience: 38
Mary Peters	Senior NEPA Specialist Purpose and Need, Alternatives, Biology, Water Resources	J.D., Law B.S., Fisheries and Wildlife Biology Years of Experience: 27
Thomas Walker	Senior Environmental Engineer Hazardous Waste	Ph.D., Environmental Engineering M.S., Civil Engineering B.S., Civil Engineering Years of Experience: 39

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**PERSONS CONTACTED**

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## 6.0 PERSONS CONTACTED

Several persons associated with WPAFB and federal, state, and local agencies contributed information and data for the preparation of this EA. The following persons were contacted or consulted.

Name	Role	Air Force Organization
Jo Lynn Anderson	Chief, Planning and Real Property Section	88 ABW/CEAOR
Treva Bashore	Environmental Restoration Program Manager	88 ABW/CEANQ
Karen Beason	EIAP Program Manager	88 ABW/CEAOR
Gary Downen	Toxics Program Manager, Asbestos	88 ABW/CEANP
Emily Erdei	Air and Water Program Support	88 ABW/CEANQ
Bill McGuyer	GIS Support	88 ABW/CEAX
Gerry Mitchell	Program Manager	88 ABW/CEPMW
Letitia Nelson	RV Storage Lot Design Manager	88 ABW/CEPMP
Zack Olds	Water Quality Program Manager	88 ABW/CEANQ
Laura Wade	Community Planner	88 ABW/CEAOR
Gardenier Ware	CE Project Manager	88 ABW/CEPMP
Darryn Warner	Natural Resources Program Manager	88 ABW/CEANQ
Paul Woodruff	Cultural Resources Program Manager	88 ABW/CEANQ
Name	Role	Agency
Johnathan Buffalo	Historical Preservation Director	Sac and Fox Tribe of the Mississippi in Iowa
Summer Sky Cohen	Tribal Historic Preservation Officer	Keweenaw Bay Indian Community
Mark Epstein	Resource Protection and Review	Ohio Historic Preservation Office
William Johnson	Historic Preservation	Saginaw Chippewa Indian Tribe
Mary Knapp	Ecological Services, Section 7 Consultation	U.S. Fish and Wildlife Service
Kurt Rinehart	Chief Engineer, Floodplain Protection	Miami Conservancy District
Lisa Stopp	Historic Preservation	United Keetoowah Band Cherokee Indians
Debbie Woischke	Species Biodiversity Database	Ohio Department of Natural Resources

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## REFERENCES

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## 7.0 REFERENCES

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## **APPENDIX A**

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### **INTERAGENCY AND INTERGOVERNMENTAL COORDINATION FOR ENVIRONMENTAL PLANNING**





DEPARTMENT OF THE AIR FORCE  
HEADQUARTERS 88TH AIR BASE WING (AFMC)  
WRIGHT-PATTERSON AIR FORCE BASE, OHIO

30 April 2012

88 ABW/CEANQ  
1450 Littrell Road, Building 22  
Wright-Patterson AFB OH 45433-5209

Kurt A. Rinehart, Chief Engineer  
Miami Conservancy District  
38 East Monument Avenue  
Dayton, OH 45402

Dear Mr. Rinehart

Wright-Patterson Air Force Base (WPAFB) is preparing an Environmental Assessment (EA) in accordance with the National Environmental Policy Act to consolidate Civil Engineering (CE) facilities in Areas A and B of the base. The proposed project is needed to combine facilities to allow CE activities to operate more efficiently. The consolidation would allow for more practical equipment storage, efficient use of space, and improved management of staff. The purpose of this letter is to notify you of the proposed project and request your evaluation of potential impacts this project may have on flood protection, water resources, and water quality under the purview of the Miami Conservancy District.

The proposed project includes the facilities and locations shown on the attached map and the following actions:

- Internal renovation of Facility 30022 (F/30022) and the relocation of shops located in Area A, which would not affect the MCD flood protection system.
- Relocation of CE operations in Area B from F/20745 to F/20614, which are within the developed part of Area B and are not within the floodplain, and therefore, would not affect the MCD flood protection system.
- Relocation of the recreational vehicle (RV) storage lot near F/20614 to Tillman Pit as an alternative to accommodate the CE functions. The RV storage lot would be located to an area west of Harshman Avenue and north of Lilly Creek, which is partially in the 100-year floodplain. The area is downstream of Huffman Dam and would not affect the MCD flood protection system. WPAFB will address floodplain issues in the EA in accordance with Federal Executive Order 11988 – Floodplain Management.

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Thank you for your assistance. If there are any questions or additional detail is needed, please contact me by telephone at 937-257-4857 or by e-mail at [darryn.warner@wpafb.ar.mil](mailto:darryn.warner@wpafb.ar.mil).

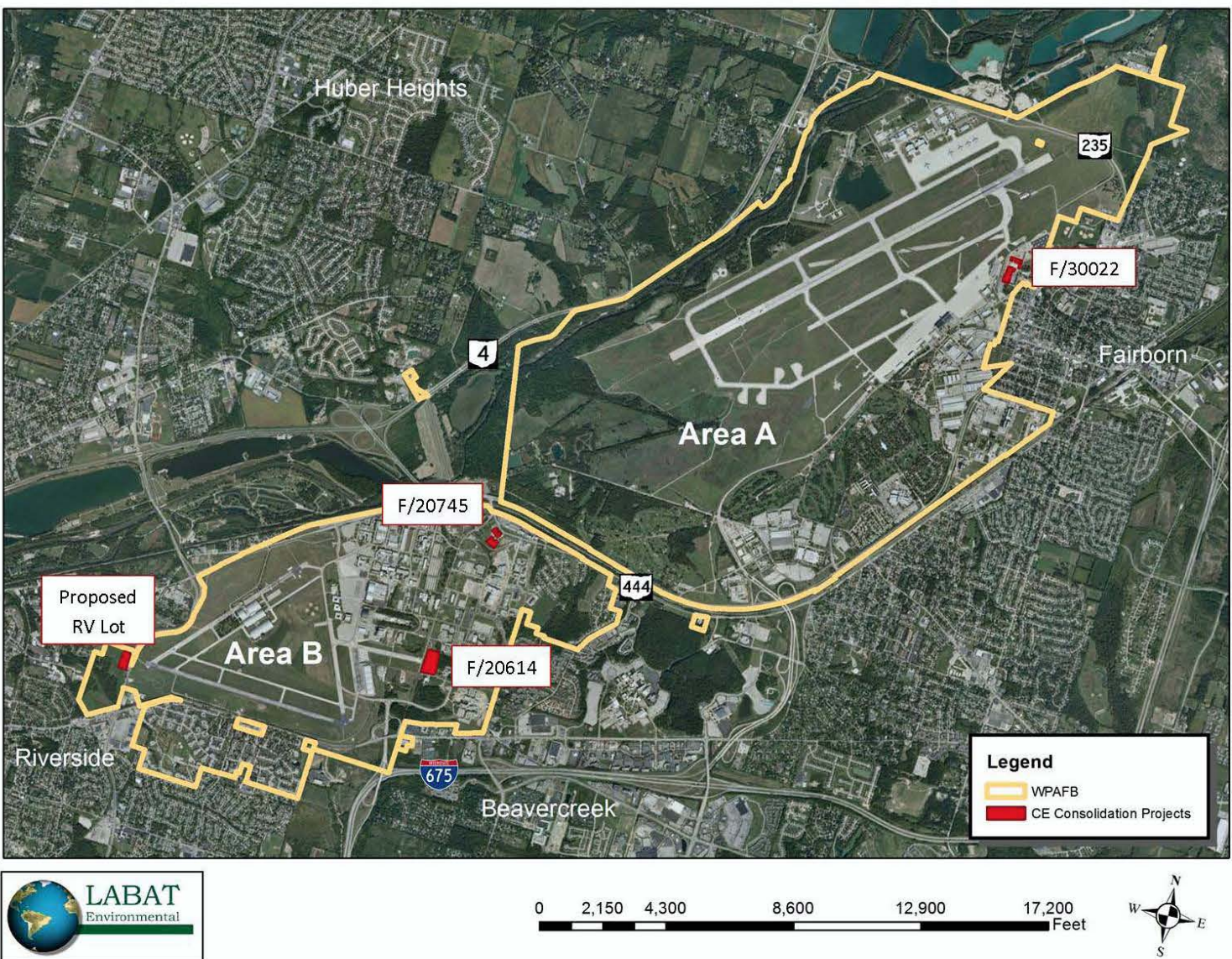
Sincerely,

DARRYN M. WARNER  
Natural Resources Program Manager  
Environmental Quality Section  
Asset Management Division

Attachment: Location Map

cc: Karen Beason (88 ABW/CEAOR, WPAFB)







*BOARD OF DIRECTORS*  
William E. Lukens  
Gayle B. Price, Jr.  
Mark G. Rentschler  
  
*GENERAL MANAGER*  
Janet M. Bly

May 15, 2012

Mr. Darryn Warner  
88 ABW/CEANQ  
1450 Littrell Road, Building 22  
Wright-Patterson AFB, OH 45433-5209

Re: Huffman Retarding Basin, WPAFB, Proposed consolidation of Civil Engineering facilities

Dear Mr. Warner:

We have reviewed the proposed changes to the Civil Engineering facilities in Areas A and B at WPAFB.

As most of the renovation is located within the Huffman Retarding Basin all development would be subject to those building restrictions as set forth by the Miami Conservancy District (MCD).

Based on our review it appears the proposed project will have little impact on the retarding basin, however, if fill material is to be placed anywhere on the property below the spillway elevation of 835.0 prior written approval must be obtained from MCD.

Thank you for the opportunity to review the project and if you have any further questions please contact me at (937) 223-1278, ext. 3230.

Sincerely,

A handwritten signature in blue ink, appearing to read "Roxanne H. Farrier", is written over a faint, larger version of the same signature.

Roxanne H. Farrier  
Property Administrator

cc: Kurt Rinehart

38 E. Monument Avenue • Dayton, Ohio 45402-1265 • 937-223-1271 • Fax 937-223-4730

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**LABAT**  
Environmental

1406 Fort Crook Road South, Suite 101  
Bellevue, NE 68005-2980  
Phone (402) 291-2362  
Fax (402) 291-2836

November 10, 2011

Ohio Department of Natural Resources  
Division of Wildlife  
Ohio Biodiversity Database Program  
4625 Morse Road, Building G-3  
Columbus, OH 43229-3096

Subject: Data Request - CE Consolidation, Wright-Patterson Air Force Base

Dear Database Administrator:

The U.S. Air Force is proposing to consolidate civil engineering (CE) operations at Wright-Patterson Air Force Base (AFB). On behalf of the 88th Air Base Wing Asset Management Division, we are requesting information on Ohio's rare plants and animals, high quality plant communities, and other natural features that may be within a one-mile radius of the proposed project location. The Database Request Form is attached. The information will be used in the preparation of an Environmental Assessment (EA) in compliance with the National Environmental Policy Act.

The proposed action involves moving operations to renovated buildings in Areas A and B, demolishing vacated buildings, relocating the RV parking lot, and capping utilities. Areas disturbed by building demolition would be graded and seeded to grass. The locations of these activities in Areas A and B are shown on the attached topographic maps.

The Draft EA is scheduled for release by mid-December and thus a prompt response is greatly appreciated. If there are any questions or additional information is needed, please contact Kelly Maiorana by telephone at 303-483-3502 or by e-mail at [kelly.maiorana@labatenv.com](mailto:kelly.maiorana@labatenv.com). Thank you for your assistance.

Sincerely,  
Labat Environmental, Inc.

A handwritten signature in black ink, appearing to read "Dan G. Moyes".

Dan G. Moyes, CECM  
Vice President

Attachments

Data Request Form  
Topographic Map

cc: Karen Beason, 88 ABW/CEAOR

LABAT Environmental Inc.

A Service-Disabled Veteran Owned Small Business



**DATA REQUEST FORM**

OHIO DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF WILDLIFE  
OHIO BIODIVERSITY DATABASE PROGRAM  
2045 MORSE RD., BLDG. G-3  
COLUMBUS, OHIO 43229-6693  
PHONE: 614-265-6452; FAX: 614-267-3096

**INSTRUCTIONS:**

Please complete both sides of this form, sign and return it to the address or fax number given above along with: (1) a brief letter describing your project, and (2) a map detailing the boundaries of your project site. A copy of the pertinent portion of a USGS 7.5 minute topographic map is preferred but other maps are acceptable. Our turnaround time is two weeks, although we can often respond more quickly. If you fax in your request you do not need to mail the original unless otherwise requested.

**FEES:**

As of June 2010, we have temporarily suspended charging a fee until a review of the data request process has been completed.

**WHAT WE PROVIDE:** The Biodiversity Database is the most comprehensive source of information on the location of Ohio's rare species and significant natural features. Records for the following will be provided: plants and animals (state and federal listed species), high quality plant communities, geologic features, breeding animal concentrations and unprotected significant natural areas. We also provide locations for managed areas including federal, state, county, local and non-profit sites, as well as state and national scenic rivers. A minimum one mile radius around the project site will automatically be searched. Because the data is sensitive information, it is our policy to provide only the data needed to complete your project.

\*\*\*\*\*

Date: 10/26/2011 Company name: LABAT ENVIRONMENTAL, INC

Name of person response letter should be addressed to: Mr. ☒ Ms. ☐

DAN MOYES

Address: 8626 TESORO, SUITE 810

City/State/Zip: SAN ANTONIO, TX 78217

Phone: 210 654 3546 Fax: 210 654 3802

E-mail address: dan.moyes@labatenv.com

Project Name: CE CONSOLIDATION EA

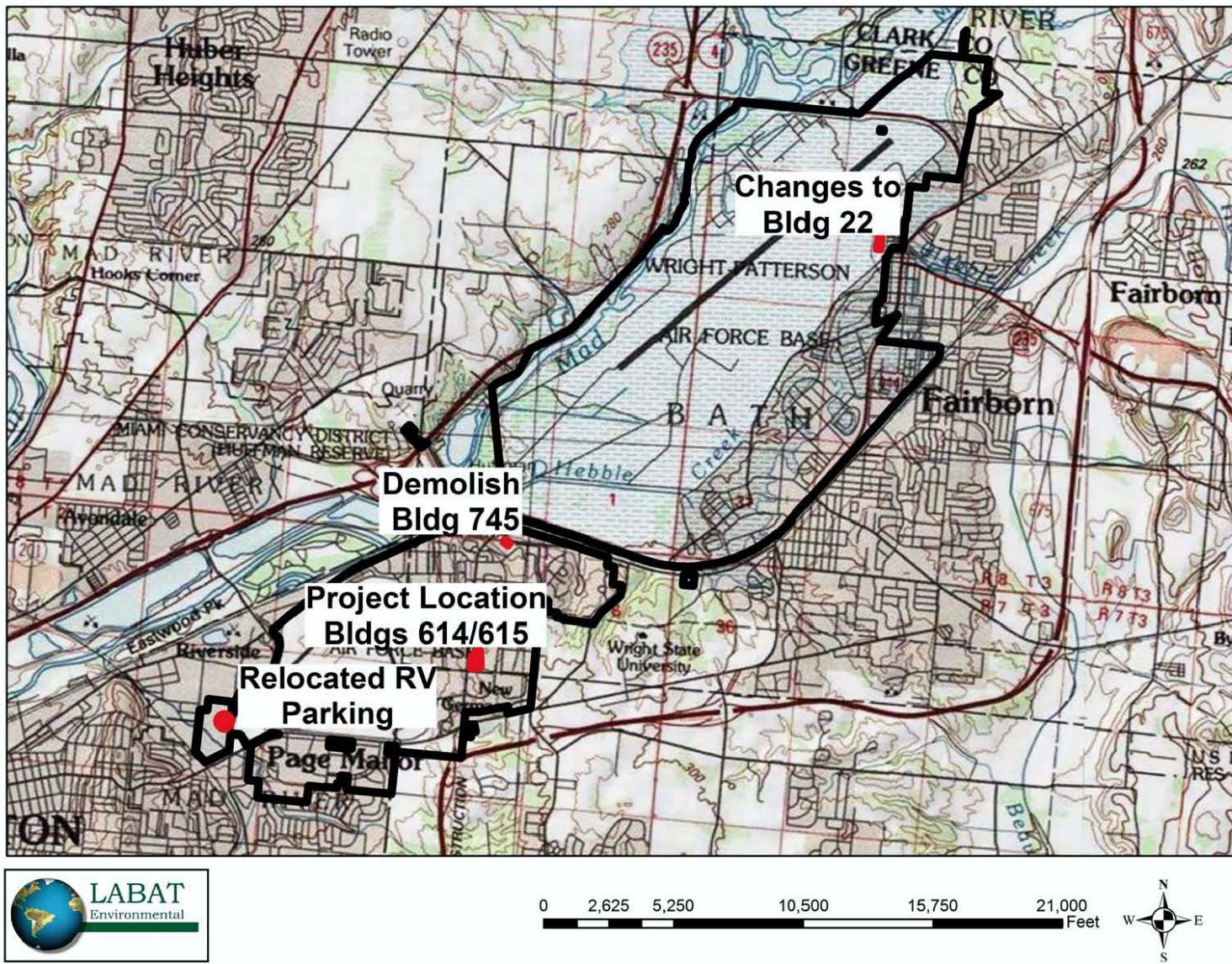
Project Number: 9324 - 010

WRIGHT-PATERSON AIR FORCE BASE  
BLDG 745: KAUFFMAN AVE AND SKYLINE DR  
BLDGs 614/615: 13<sup>TH</sup> ST AND SKYLINE DR  
Project Site Address: BLDG 22: 1450 LITRELL ROAD  
Project County: MONTGOMERY COUNTY / GREENE COUNTY  
Project City/Township: FAIRBORN / RIVERSIDE  
Project site is located on the following USGS 7.5 minute topographic quad(s): \_\_\_\_\_  
FAIRBORN 1992 1:24,000  
SECTION 12 T 7.0N R 2.0E  
Description of work to be performed at the project site: CONSOLIDATE CIVIL  
ENGINEERING (CE) OPERATIONS FROM BLDG 745 TO BLDGS 614/  
615.  
RENOVATE SHOPS IN BLDG 22; RELOCATE RV STORAGE  
TO TILGHAN PIT.  
How do you want your data reported? (Both formats provide exactly the same data. The only difference is in the format of our response. The manual search is most appropriate for small scale projects or for those who do not have GIS capabilities. Please choose only one option.)  
Printed list and map (manual search) X OR GIS shapefile (computer search) \_\_\_\_\_  
Additional information you require: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
How will the information be used? PREPARATION OF AN ENVIRONMENTAL  
ASSESSMENT FOR CONSOLIDATION OF CIVIL ENGINEERING  
(CE) OPERATIONS IN COMPLIANCE WITH NATIONAL  
ENVIRONMENTAL POLICY ACT.  
I certify that data supplied by the Ohio Biodiversity Database Program will not be published without crediting the ODNR Division of Wildlife as the source of the material. In addition, I certify that electronic datasets will not be distributed to others without the consent of the Division of Wildlife, Ohio Biodiversity Program.

Signature \_\_\_\_\_  
Date: November 10, 2011

DNR 5203  
REV 8/2010





Attachment to LEI Letter, Nov. 10, 2011  
Page 3 of 3





## Ohio Department of Natural Resources

JOHN R. KASICH, GOVERNOR

SCOTT A. ZOBY, INTERIM DIRECTOR

**Ohio Division of Wildlife**  
David B. Lane, Chief  
2045 Morse Rd., Bldg. G  
Columbus, OH 43229-6693  
Phone: (614) 265-6300

November 14, 2011

Dan Moyes  
Labat Environmental, Inc.  
8626 Tesoro, Suite 810  
San Antonio, TX 78217

Dear Mr. Moyes:

I have reviewed the Biodiversity Database for the Wright-Patterson Air Force Base Civil Engineering Operations Consolidation project area, including a one mile radius, in Bath and Beaver Creek Townships, Greene County and Mad River Township, Montgomery County, and on the Fairborn Quad (9324-010). The numbers/letters on the list below correspond to the areas marked on the accompanying map. Common name, scientific name and status are given for each species.

### Fairborn Quad

- A. Huffman MetroPark – Five Rivers MetroParks (3 parcels)
- B. Dayton Aviation Heritage National Historical Park – National Park Service
- 1. *Bartramia longicauda* – Upland Sandpiper, threatened
- 2. *Carex mesochorea* – Midland Sedge, endangered
- 3. *Myotis sodalis* – Indiana Bat, state endangered, federal endangered

In addition to the species given in the list above, there is a record for the Eastern Massasauga (*Sistrurus catenatus*, state endangered, federal candidate species) within your project study area. Please be aware that we do not give out specific location data on this sensitive species so it is not included in the list above or shown on the attached map. Throughout much of its range in the eastern United States, Eastern Massasaugas are found in wet prairies, sedge meadows and early successional fields. Preferred wetland habitats are marshes and fens. They avoid open water and seem to prefer the cover of broad-leaved plants, emergents, and sedges. Natural succession of woody vegetation is a leading cause of recent habitat deterioration throughout its range. Intensive management to retard woody vegetation growth is necessary to maintain suitable habitat conditions.

Due to the project's proximity to current records, if appropriate habitat (as described above) is located within the project area, a habitat survey is required on the proposed site. The survey must be done by a professional herpetologist approved by the DOW. Unless the herpetologist determines that the presence of the Eastern Massasauga is highly unlikely, a presence/absence

Dan Moyes  
November 14, 2011  
Page 2

survey will be required. If appropriate habitat is not present in the project area or vicinity, the project is not likely to have a negative impact to the species.

We are unaware of any unique ecological sites, geologic features, animal assemblages, scenic rivers, state wildlife areas, nature preserves, parks or forests or national wildlife refuges, parks or forests within a one mile radius of the project area.

Our inventory program has not completely surveyed Ohio and relies on information supplied by many individuals and organizations. Therefore, a lack of records for any particular area is not a statement that rare species or unique features are absent from that area. Please note that although we inventory all types of plant communities, we only maintain records on the highest quality areas.

Please contact me at 614-265-6818 if I can be of further assistance.

Sincerely,



Debbie Woischke, Ecological Analyst  
Ohio Biodiversity Database Program







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DEPARTMENT OF THE AIR FORCE  
HEADQUARTERS 88TH AIR BASE WING (AFMC)  
WRIGHT-PATTERSON AIR FORCE BASE, OHIO

26 March 2012

Paul F. Woodruff, CRM  
88 ABW/CEANQ  
1450 Littrell Road  
Wright-Patterson AFB OH 45433-5209

Mr. Mark Epstein  
Department Head, Resource Protection & Review  
Ohio Historic Preservation Office  
800 East 17<sup>th</sup> Ave  
Columbus OH 43211-2497

Dear Mr. Epstein

Wright-Patterson Air Force Base (WPAFB) is preparing an Environmental Assessment (EA) in accordance with the requirements of the National Environmental Policy Act of 1969 to address environmental impacts associated with the proposal to implement a project to consolidate Civil Engineering (CE) functions across the base. The CE Consolidation project (Proposed Action) is a multi-component undertaking at several locations in Areas A and B of WPAFB. It is our opinion that the proposed undertaking would have no adverse effect on any historic properties listed or eligible for listing on the National Register of Historic Places. In accordance with 36 CFR 800.11(e), we are submitting the following documentation.

Description of the undertaking. WPAFB proposes an undertaking which consists of four project locations; three of which are within the boundaries of Areas A and B and one the Tillman Pit area which is part of Area B, but separated from the area by a highway (see Attachment 1). In Area B, current functions at Facility 20745 will be consolidated and moved to Facility 20614, which will be expanded with a 15,000 square foot addition to accommodate the relocated functions (see Attachment 2 and 3). The recreational vehicle storage lot near Facility 20614 will be relocated to the former outdoor equipment storage lot near Facility 20745. In Area A, current CE functions in Facility 30017 and Facility 30029 will be consolidated and moved into Facility 30022, which will undergo an interior renovation to accommodate new functions. Current functions in Facility 30021 will be relocated to Facility 30016 which will not be altered in any way (see Attachment 4). A new gravel recreational vehicle storage lot is proposed to be constructed on the Tillman Pit area on Harshman Road (see Attachment 5). These actions will result in the ultimate demolition of four buildings. Facilities 20745, 30017, 30021, and 30029 will be demolished under a separate project contract. A separate Area of Potential Effect (APE) was considered for each project location (Attachments 2-5) and have been defined as APE 1 through 4 for clarity.

Description of steps taken to identify historic properties. WPAFB has assessed all buildings on the installation that are 50 years old or older, and has assessed buildings for exceptional significance relating to the Cold War. The Identified Resources table (Attachment 6) lists the non-eligible facilities directly altered/affected by the undertaking, identified eligible and contributing cultural resources located within individual APEs, and facilities to be demolished as part of the cumulative impact of the undertaking. As part of the Integrated Cultural Resources Management Plan at WPAFB, surveys have been conducted encompassing the entire Base to locate historic and prehistoric archaeological sites. Numerous

archaeological surveys have been conducted at WPAFB beginning in the 1990's with the US Army Corps of Engineers Research Lab and continuing with various other contractors resulting in identification of eligible and non-eligible sites (Attachment 7, 2011 WPAFB-ICRMP maps). The Ohio Historic Inventory forms for noted facilities are enclosed as Attachment 8.

The locations of projects associated with this undertaking are not located within any historic district, nor is there any National Register listed or eligible sites, buildings, structures, or objects within the individual APEs that would be directly affected by ground disturbance, construction, or demolition activities for this undertaking.

Associated with APE 1, Facilities 20614 and 20615 were constructed in 1993, and Facility 20612 was constructed in 1995. They are utilitarian structures with no historical or architectural significance. APE 1 encompasses a small part of the southeastern edge of the Wright Field Historic District including Facilities 20004, 20065, 20079, and one structure (Accelerated Runway) contributing to the district as well. Facilities 20470 and 20653 are individually eligible buildings within APE 1. All five facilities are eligible for listing on the National Register including the historic district and the Accelerated Runway.

Associated with APE 2, Facility 20745 is a single story utilitarian structure constructed in 1944 to serve as the Quartermaster Laundry. It is a concrete block building with a flat roof and multiple additions. The building was evaluated for historical significance in 1996 and determined not eligible for the National Register, nor does it contribute to the Wright Field Historic District. Facility 20084 was constructed in 1945 as a small security station (Gate 16B) located on Skyline Drive approximately 400 feet to the northwest of Facility 20745. Facility 20084, although currently not in use, is a contributing resource to the Wright Field Historic District.

Associated with APE 3, Facility 30022 was constructed in 1943 as the Base Construction and Utilities Building. It is not historically or architecturally significant and has undergone a series of additions and alterations through the years, and is not eligible for the National Register. Facility 30017 was constructed in 1948 as a Base Engineering Maintenance Shop. Designed as a strictly utilitarian building, Facility 30017 was evaluated in 1998 and determined not eligible for the National Register. Facility 30021 was constructed in 1943 as a Base Engineering Maintenance Shop. It was evaluated in 1996 and determined not eligible for the National Register. Facility 30029 was constructed in 1943 as a Base Engineering Storage Facility. Facility 30029 is also a utilitarian warehouse constructed with wood-framing and is clad in metal siding. Facility 30029 was evaluated in 1996 and determined not eligible for the National Register. APE 3 encompasses a small part of the northern edge of the Fairfield Air Depot Historic District including Facilities 30206 and 30123 which are contributing resource to the historic district.

Associated with APE 4 is the Wright Field Runway which is adjacent to albeit across Harshman Road from the Tillman Pit area. The Triangular Runway, a contributing structure to the district, is partially located within the APE, beginning approximately 600 feet to the east of the proposed lot.

Description of the undertaking's effects on historic properties. There are currently no known eligible or potentially eligible archaeological sites within any of the areas of potential effects for this undertaking. The locations of proposed work associated with the undertaking are not located within any historic district, nor are there any National Register listed or eligible sites, buildings, structures, or objects within the individual APEs that would be directly affected by ground disturbance or construction activities for this undertaking. Within APE 1 only the three non-historic facilities 20614, 20615, and 20612 would be




directly affected with only Facility 30614 undergoing alterations including a 15,000 square foot addition. Existing paved and gravel lots will serve as vehicle parking, and CE equipment storage respectively. Construction would not alter the visible or audible characteristics of the Wright Field Historic District or affect the facilities noted in APE 1. The location for the work proposed as part of the undertaking for APE 1 is at the top of the hilltop area of Area B, and none of the work proposed for the non-historic facilities would be visible from within the Wright Field Historic District within APE 1. It is our opinion that the proposed work at Facility 20614 would have no effect upon the Accelerated Runway or Facilities 20653 or 20470. Within APE 2, demolition of Facility 20745 would not have an adverse effect on historic properties. The only eligible structure is Facility 20084 which is 400 feet to the northwest and is not in use. No significant visual impact would affect this property. Within APE 3, alterations to Facility 30022 as a result of the undertaking will be limited to the interior to accommodate the relocations of functions from Facilities 30029 and 30017. No adverse impact to Facility 30022 would occur from the interior renovation, since the facility is not considered historic. Demolition of Facilities 30017, 30021, and 30029 would not adversely affect the Fairfield Air Depot (FAD) Historic District or its contributing resources since they are located approximately 2,000 feet to the Northwest of the FAD Historic District. Facility 30022 and adjacent Facility 30019 effectively screen the proposed demolitions from view within the historic district. Within APE 4, construction of a recreational vehicle storage lot would have no effect on historic properties. The location is a heavily disturbed area which is part of existing Landfill 2 (Tillman Pit) and therefore no archaeological resources would be affected. Activities associated with the construction and continued use of the recreational vehicle lot would be located entirely to the west of Harshman Avenue, and will not impact the historic runways or district.

It is our opinion that the proposed undertaking associated with the CE Consolidation Project will not impact any identified historic properties listed or eligible for listing on the National Register. Construction would not alter the visible or audible characteristics of the Wright Field Historic District nor the Fairfield Air Depot Historic District. Therefore, in accordance with 36 CFR 800.5(b), we have determined the proposed CE Consolidation Project would have no adverse effect on historic properties.

WPAFB is consulting with the four Native American Tribes who requested consultation when ground disturbing activities on previously undisturbed land is proposed.

Please review the information we have provided and let us know whether you concur with the determinations of effects outlined above. Should you have questions, I can be reached at (937) 257-1374, or via email at paul.woodruff@wpafb.af.mil.

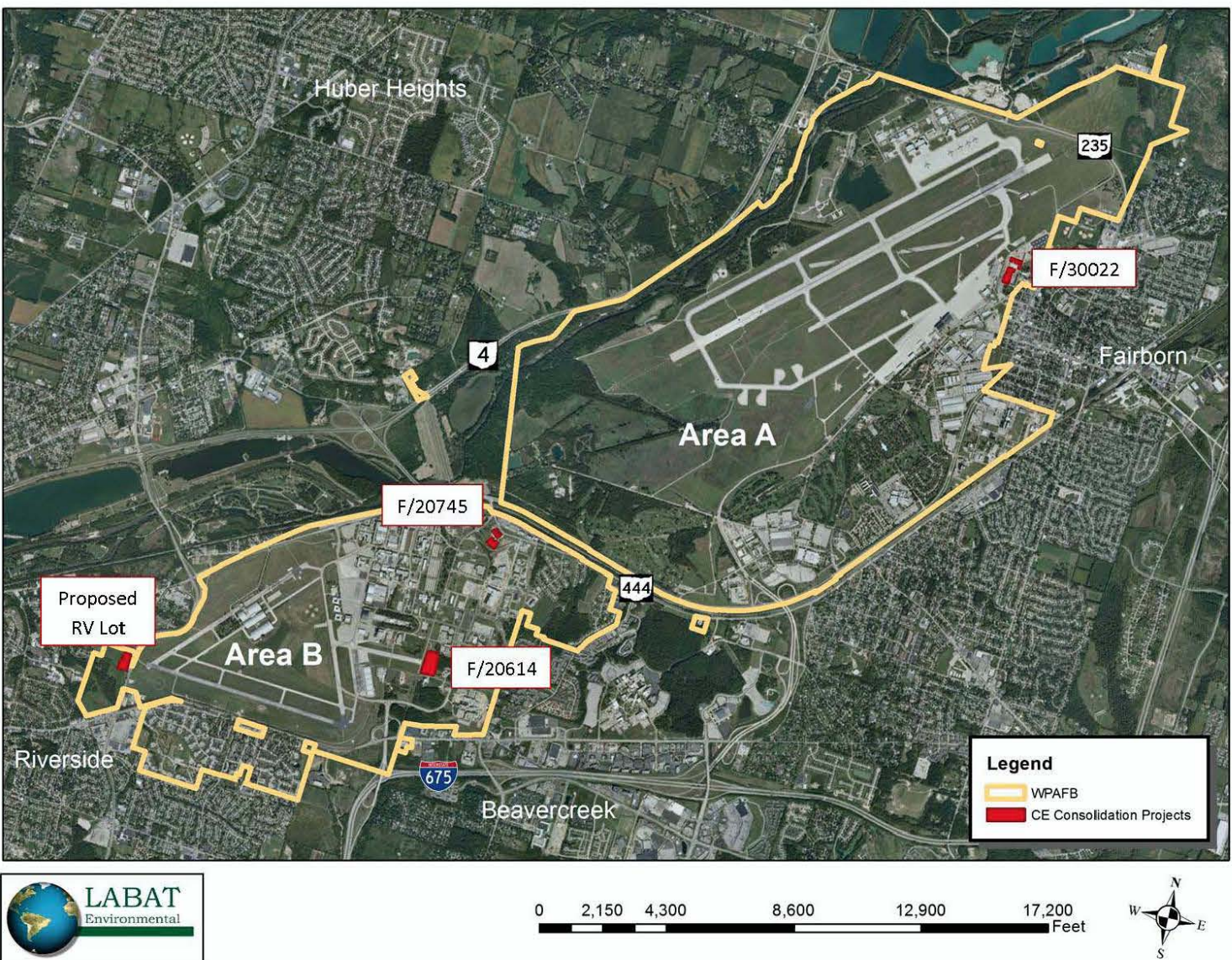
Sincerely



Paul F. Woodruff  
Cultural Resources Manager  
Environmental Quality Section  
Environmental Branch

Attachments:

1. Projects Locator Map
2. APE near F/20614 in Area B
3. APE near F/20745 in Area B
4. APE near F/30022 in Area A
5. APE near Tillman Pit in Area B
6. Identified Resources Table
7. WPAFB Archaeological Mapping (ICRMP 2011)
8. OHI Forms



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Attachments 2 through 8 are available upon request following confidentiality requirements under Air Force Instruction 32-7065 (1 Jun 04; Section 4.4) and pertinent authorities protecting cultural resources. For further information, contact:

Cultural Resources Manager  
88 ABW/CEANQ  
Wright-Patterson AFB  
937-257-1374

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DEPARTMENT OF THE AIR FORCE  
HEADQUARTERS 88TH AIR BASE WING (AFMC)  
WRIGHT-PATTERSON AIR FORCE BASE, OHIO

7 May 2012

Paul F. Woodruff, CRM  
88 ABW/CEANQ  
1450 Littrell Road  
Wright-Patterson AFB OH 45433-5209

Ms. Summer Sky Cohen, Officer  
Tribal Historic Preservation Office  
Keweenaw Bay Indian Community  
16429 Beartown Road  
Baraga, MI 49908

Dear Ms. Cohen

Wright-Patterson Air Force Base (WPAFB) is preparing Environmental Assessments (EA) in accordance with the requirements of the National Environmental Policy Act (NEPA) to analyze the potential impacts from implementation of two separate undertakings proposed for WPAFB. One EA is for the proposed construction of a Tomography Range and Equipment Storage Facility in Area B of WPAFB. The range would support the Sensor Directorate's tomography mission. The proposed location for the range and storage facility is a vacant area (approximately 13 acres) in the southwest corner of Area B, as shown on Attachment 1. The second EA is for the proposal to implement a project to consolidate Civil Engineering (CE) functions across the base. The CE Consolidation project is a multi-component undertaking at several locations in Areas A and B of WPAFB (see Attachment 2). It is our opinion that neither of the proposed undertakings would have an adverse effect on any historic properties listed or eligible for listing on the National Register of Historic Places. In accordance with 36 CFR 800.11(e), we are submitting the following documentation to support this determination.

Description of the undertaking. The Tomography Range project includes installing twelve (12) fifty-foot towers with guy wires equally spaced in a circular pattern approximately 200 meters (650 feet) in diameter. Tower foundations, electric power supply, fiber optic lines, security lighting, lighting protection, compacted gravel drives, parking pad, and a 30' x 50' concrete block equipment storage facility would be constructed to operate and maintain the range (see Attachment 1). Minimal excavation would be required to construct the concrete tower foundations and poles. The twelve (12) tower foundations would require the excavation of a 4' x 6' area no more than 2' deep. The poles will be buried 77" inches in order to stabilize the antenna. The CE Consolidation project consists of four project locations; three of which are within the boundaries of Areas A and B (see Attachment 2). The project involves consolidation of services, alterations of existing facilities, and demolition of existing vacated facilities within the project areas. Also included would be the construction of a new gravel recreational vehicle storage lot proposed to be constructed on a section of WPAFB property west of Harshman Road.

Description of steps taken to identify historic properties. WPAFB has assessed all buildings on the installation that are 50 years old or older, and has assessed buildings for exceptional significance relating to the Cold War. As part of the Integrated Cultural Resources Management Plan at WPAFB, surveys

have been conducted encompassing the entire Base to locate historic and prehistoric archaeological sites. Numerous archaeological surveys have been conducted at WPAFB beginning in the 1990's with the U.S. Army Corps of Engineers Research Lab and continuing with various other contractors resulting in identification of eligible and non-eligible sites (Attachment 3, 2011 WPAFB-ICRMP maps). A Phase I archaeological survey of the Tomography Range project site was conducted with field work completed in March 2012. A letter report of the preliminary results of the field work is provided as Attachment 4. Based on the available information we have determined that there are no archaeological resources at the project site eligible for the National Register.

Description of the affected properties. There are no known archaeological sites listed or eligible for listing on the Nation Register of Historic Places within any of the Areas of Potential Effect for either of the EA project sites. The areas of the Base that would endure ground disturbance resulting from construction or demolition at all project site locations, except the Tomography Range site have been documented to be previously disturbed ground. The Tomography Range site was not previously surveyed for archaeological resources, therefore a Phase I archaeological survey of the site was performed.

Description of the undertaking's effects on historic properties. With completion of the Phase I archaeological survey of the Tomography range site, it is our opinion that based on the available information, we have determined that there are no archaeological resources at the project site eligible for the National Register. There are no known archaeological resources affected by either proposed undertaking. Therefore, in accordance with 36 CFR 800.5(b), we have determined that the proposed construction of a Tomography Range and Equipment Storage Facility and the proposed CE Consolidation project would have no adverse effect on historic properties.

WPAFB is currently consulting with the Ohio State Historic Preservation Office regarding this undertaking. Please review the information and if you have any concerns in the areas described, please contact me by phone at (937) 257-1374 or email me at [paul.woodruff@wpafb.af.mil](mailto:paul.woodruff@wpafb.af.mil).

Sincerely



Paul F. Woodruff  
Cultural Resources Manager  
Environmental Quality Section  
Environmental Branch

Attachments:

1. Tomography Range Project Location
2. CE Consolidation Project Locations
3. WPAFB Archaeological Mapping (ICRMP 2011)
4. Archaeology Survey Preliminary Report



DEPARTMENT OF THE AIR FORCE  
HEADQUARTERS 88TH AIR BASE WING (AFMC)  
WRIGHT-PATTERSON AIR FORCE BASE, OHIO

7 May 2012

Paul F. Woodruff, CRM  
88 ABW/CEANQ  
1450 Littrell Road  
Wright-Patterson AFB OH 45433-5209

Mr. Johnathan L. Buffalo  
Historical Preservation Director/NAGPRA Rep  
Sac and Fox of the Mississippi in Iowa  
349 Meskwaki Road  
Tama, IA 52339-9634

Dear Mr. Buffalo

Wright-Patterson Air Force Base (WPAFB) is preparing Environmental Assessments (EA) in accordance with the requirements of the National Environmental Policy Act (NEPA) to analyze the potential impacts from implementation of two separate undertakings proposed for WPAFB. One EA is for the proposed construction of a Tomography Range and Equipment Storage Facility in Area B of WPAFB. The range would support the Sensor Directorate's tomography mission. The proposed location for the range and storage facility is a vacant area (approximately 13 acres) in the southwest corner of Area B, as shown on Attachment 1. The second EA is for the proposal to implement a project to consolidate Civil Engineering (CE) functions across the base. The CE Consolidation project is a multi-component undertaking at several locations in Areas A and B of WPAFB (see Attachment 2). It is our opinion that neither of the proposed undertakings would have an adverse effect on any historic properties listed or eligible for listing on the National Register of Historic Places. In accordance with 36 CFR 800.11(e), we are submitting the following documentation to support this determination.

Description of the undertaking. The Tomography Range project includes installing twelve (12) fifty-foot towers with guy wires equally spaced in a circular pattern approximately 200 meters (650 feet) in diameter. Tower foundations, electric power supply, fiber optic lines, security lighting, lighting protection, compacted gravel drives, parking pad, and a 30' x 50' concrete block equipment storage facility would be constructed to operate and maintain the range (see Attachment 1). Minimal excavation would be required to construct the concrete tower foundations and poles. The twelve (12) tower foundations would require the excavation of a 4' x 6' area no more than 2' deep. The poles will be buried 77" inches in order to stabilize the antenna. The CE Consolidation project consists of four project locations; three of which are within the boundaries of Areas A and B (see Attachment 2). The project involves consolidation of services, alterations of existing facilities, and demolition of existing vacated facilities within the project areas. Also included would be the construction of a new gravel recreational vehicle storage lot proposed to be constructed on a section of WPAFB property west of Harshman Road.

Description of steps taken to identify historic properties. WPAFB has assessed all buildings on the installation that are 50 years old or older, and has assessed buildings for exceptional significance relating to the Cold War. As part of the Integrated Cultural Resources Management Plan at WPAFB, surveys



have been conducted encompassing the entire Base to locate historic and prehistoric archaeological sites. Numerous archaeological surveys have been conducted at WPAFB beginning in the 1990's with the U.S. Army Corps of Engineers Research Lab and continuing with various other contractors resulting in identification of eligible and non-eligible sites (Attachment 3, 2011 WPAFB-ICRMP maps). A Phase I archaeological survey of the Tomography Range project site was conducted with field work completed in March 2012. A letter report of the preliminary results of the field work is provided as Attachment 4. Based on the available information we have determined that there are no archaeological resources at the project site eligible for the National Register.

Description of the affected properties. There are no known archaeological sites listed or eligible for listing on the Nation Register of Historic Places within any of the Areas of Potential Effect for either of the EA project sites. The areas of the Base that would endure ground disturbance resulting from construction or demolition at all project site locations, except the Tomography Range site have been documented to be previously disturbed ground. The Tomography Range site was not previously surveyed for archaeological resources, therefore a Phase I archaeological survey of the site was performed.

Description of the undertaking's effects on historic properties. With completion of the Phase I archaeological survey of the Tomography range site, it is our opinion that based on the available information, we have determined that there are no archaeological resources at the project site eligible for the National Register. There are no known archaeological resources affected by either proposed undertaking. Therefore, in accordance with 36 CFR 800.5(b), we have determined that the proposed construction of a Tomography Range and Equipment Storage Facility and the proposed CE Consolidation project would have no adverse effect on historic properties.

WPAFB is currently consulting with the Ohio State Historic Preservation Office regarding this undertaking. Please review the information and if you have any concerns in the areas described, please contact me by phone at (937) 257-1374 or email me at [paul.woodruff@wpafb.af.mil](mailto:paul.woodruff@wpafb.af.mil).

Sincerely



Paul F. Woodruff  
Cultural Resources Manager  
Environmental Quality Section  
Environmental Branch

Attachments:

1. Tomography Range Project Location
2. CE Consolidation Project Locations
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DEPARTMENT OF THE AIR FORCE  
HEADQUARTERS 88TH AIR BASE WING (AFMC)  
WRIGHT-PATTERSON AIR FORCE BASE, OHIO

7 May 2012

Paul F. Woodruff, CRM  
88 ABW/CEANQ  
1450 Littrell Road  
Wright-Patterson AFB OH 45433-5209

Mr. William Johnson  
The Saginaw Chippewa Indian Tribe  
6650 East Broadway  
Mt. Pleasant, MI 48858

Dear Mr. Johnson

Wright-Patterson Air Force Base (WPAFB) is preparing Environmental Assessments (EA) in accordance with the requirements of the National Environmental Policy Act (NEPA) to analyze the potential impacts from implementation of two separate undertakings proposed for WPAFB. One EA is for the proposed construction of a Tomography Range and Equipment Storage Facility in Area B of WPAFB. The range would support the Sensor Directorate's tomography mission. The proposed location for the range and storage facility is a vacant area (approximately 13 acres) in the southwest corner of Area B, as shown on Attachment 1. The second EA is for the proposal to implement a project to consolidate Civil Engineering (CE) functions across the base. The CE Consolidation project is a multi-component undertaking at several locations in Areas A and B of WPAFB (see Attachment 2). It is our opinion that neither of the proposed undertakings would have an adverse effect on any historic properties listed or eligible for listing on the National Register of Historic Places. In accordance with 36 CFR 800.11(e), we are submitting the following documentation to support this determination.

Description of the undertaking. The Tomography Range project includes installing twelve (12) fifty-foot towers with guy wires equally spaced in a circular pattern approximately 200 meters (650 feet) in diameter. Tower foundations, electric power supply, fiber optic lines, security lighting, lighting protection, compacted gravel drives, parking pad, and a 30' x 50' concrete block equipment storage facility would be constructed to operate and maintain the range (see Attachment 1). Minimal excavation would be required to construct the concrete tower foundations and poles. The twelve (12) tower foundations would require the excavation of a 4' x 6' area no more than 2' deep. The poles will be buried 77" inches in order to stabilize the antenna. The CE Consolidation project consists of four project locations; three of which are within the boundaries of Areas A and B (see Attachment 2). The project involves consolidation of services, alterations of existing facilities, and demolition of existing vacated facilities within the project areas. Also included would be the construction of a new gravel recreational vehicle storage lot proposed to be constructed on a section of WPAFB property west of Harshman Road.

Description of steps taken to identify historic properties. WPAFB has assessed all buildings on the installation that are 50 years old or older, and has assessed buildings for exceptional significance relating to the Cold War. As part of the Integrated Cultural Resources Management Plan at WPAFB, surveys have been conducted encompassing the entire Base to locate historic and prehistoric archaeological sites.

Numerous archaeological surveys have been conducted at WPAFB beginning in the 1990's with the U.S. Army Corps of Engineers Research Lab and continuing with various other contractors resulting in identification of eligible and non-eligible sites (Attachment 3, 2011 WPAFB-ICRMP maps). A Phase I archaeological survey of the Tomography Range project site was conducted with field work completed in March 2012. A letter report of the preliminary results of the field work is provided as Attachment 4. Based on the available information we have determined that there are no archaeological resources at the project site eligible for the National Register.

Description of the affected properties. There are no known archaeological sites listed or eligible for listing on the Nation Register of Historic Places within any of the Areas of Potential Effect for either of the EA project sites. The areas of the Base that would endure ground disturbance resulting from construction or demolition at all project site locations, except the Tomography Range site have been documented to be previously disturbed ground. The Tomography Range site was not previously surveyed for archaeological resources, therefore a Phase I archaeological survey of the site was performed.

Description of the undertaking's effects on historic properties. With completion of the Phase I archaeological survey of the Tomography range site, it is our opinion that based on the available information, we have determined that there are no archaeological resources at the project site eligible for the National Register. There are no known archaeological resources affected by either proposed undertaking. Therefore, in accordance with 36 CFR 800.5(b), we have determined that the proposed construction of a Tomography Range and Equipment Storage Facility and the proposed CE Consolidation project would have no adverse effect on historic properties.

WPAFB is currently consulting with the Ohio State Historic Preservation Office regarding this undertaking. Please review the information and if you have any concerns in the areas described, please contact me by phone at (937) 257-1374 or email me at [paul.woodruff@wpafb.af.mil](mailto:paul.woodruff@wpafb.af.mil).

Sincerely



Paul F. Woodruff  
Cultural Resources Manager  
Environmental Quality Section  
Environmental Branch

Attachments:

1. Tomography Range Project Location
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DEPARTMENT OF THE AIR FORCE  
HEADQUARTERS 88TH AIR BASE WING (AFMC)  
WRIGHT-PATTERSON AIR FORCE BASE, OHIO

7 May 2012

Paul F. Woodruff, CRM  
88 ABW/CEANQ  
1450 Littrell Road  
Wright-Patterson AFB OH 45433-5209

Ms. Lisa Larue  
United Keetoowah Band of Cherokee Indians in Oklahoma  
PO Box 746  
Tahlequah, OK 74465

Dear Ms. Larue

Wright-Patterson Air Force Base (WPAFB) is preparing Environmental Assessments (EA) in accordance with the requirements of the National Environmental Policy Act (NEPA) to analyze the potential impacts from implementation of two separate undertakings proposed for WPAFB. One EA is for the proposed construction of a Tomography Range and Equipment Storage Facility in Area B of WPAFB. The range would support the Sensor Directorate's tomography mission. The proposed location for the range and storage facility is a vacant area (approximately 13 acres) in the southwest corner of Area B, as shown on Attachment 1. The second EA is for the proposal to implement a project to consolidate Civil Engineering (CE) functions across the base. The CE Consolidation project is a multi-component undertaking at several locations in Areas A and B of WPAFB (see Attachment 2). It is our opinion that neither of the proposed undertakings would have an adverse effect on any historic properties listed or eligible for listing on the National Register of Historic Places. In accordance with 36 CFR 800.11(e), we are submitting the following documentation to support this determination.

Description of the undertaking. The Tomography Range project includes installing twelve (12) fifty-foot towers with guy wires equally spaced in a circular pattern approximately 200 meters (650 feet) in diameter. Tower foundations, electric power supply, fiber optic lines, security lighting, lighting protection, compacted gravel drives, parking pad, and a 30' x 50' concrete block equipment storage facility would be constructed to operate and maintain the range (see Attachment 1). Minimal excavation would be required to construct the concrete tower foundations and poles. The twelve (12) tower foundations would require the excavation of a 4' x 6' area no more than 2' deep. The poles will be buried 77" inches in order to stabilize the antenna. The CE Consolidation project consists of four project locations; three of which are within the boundaries of Areas A and B (see Attachment 2). The project involves consolidation of services, alterations of existing facilities, and demolition of existing vacated facilities within the project areas. Also included would be the construction of a new gravel recreational vehicle storage lot proposed to be constructed on a section of WPAFB property west of Harshman Road.

Description of steps taken to identify historic properties. WPAFB has assessed all buildings on the installation that are 50 years old or older, and has assessed buildings for exceptional significance relating to the Cold War. As part of the Integrated Cultural Resources Management Plan at WPAFB, surveys have been conducted encompassing the entire Base to locate historic and prehistoric archaeological sites.

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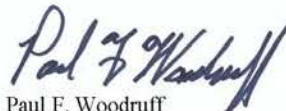
Numerous archaeological surveys have been conducted at WPAFB beginning in the 1990's with the U.S. Army Corps of Engineers Research Lab and continuing with various other contractors resulting in identification of eligible and non-eligible sites (Attachment 3, 2011 WPAFB-ICRMP maps). A Phase I archaeological survey of the Tomography Range project site was conducted with field work completed in March 2012. A letter report of the preliminary results of the field work is provided as Attachment 4. Based on the available information we have determined that there are no archaeological resources at the project site eligible for the National Register.

Description of the affected properties. There are no known archaeological sites listed or eligible for listing on the Nation Register of Historic Places within any of the Areas of Potential Effect for either of the EA project sites. The areas of the Base that would endure ground disturbance resulting from construction or demolition at all project site locations, except the Tomography Range site have been documented to be previously disturbed ground. The Tomography Range site was not previously surveyed for archaeological resources, therefore a Phase I archaeological survey of the site was performed.

Description of the undertaking's effects on historic properties. With completion of the Phase I archaeological survey of the Tomography range site, it is our opinion that based on the available information, we have determined that there are no archaeological resources at the project site eligible for the National Register. There are no known archaeological resources affected by either proposed undertaking. Therefore, in accordance with 36 CFR 800.5(b), we have determined that the proposed construction of a Tomography Range and Equipment Storage Facility and the proposed CE Consolidation project would have no adverse effect on historic properties.

WPAFB is currently consulting with the Ohio State Historic Preservation Office regarding this undertaking. Please review the information and if you have any concerns in the areas described, please contact me by phone at (937) 257-1374 or email me at [paul.woodruff@wpafb.af.mil](mailto:paul.woodruff@wpafb.af.mil).

Sincerely



Paul F. Woodruff  
Cultural Resources Manager  
Environmental Quality Section  
Environmental Branch

Attachments:

1. Tomography Range Project Location
2. CE Consolidation Project Locations
3. WPAFB Archaeological Mapping (ICRMP 2011)
4. Archaeology Survey Preliminary Report

- 1 No response was received from any of the four Native American Tribes contacted.

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June 5, 2012

Paul Woodruff, Cultural Resources Manager  
Environmental Quality Section  
Environmental Branch  
88 ABW/CEANQ  
1450 Littrell Road  
Wright-Patterson AFB OH 45433-5209

Re: Civil Engineering Consolidation Project, Wright Patterson Air Force Base

Dear Mr. Woodruff,

This is in response to correspondence from your office dated March 26, 2012 (received April 30, 2012), regarding the above referenced undertaking. Comments of the Ohio Historic Preservation Office (OHPO) are offered under provisions of the National Historic Preservation Act of 1966, as amended (16 USC 470 with implementing regulations at 36 CFR 800).

In an effort to consolidate its civil engineering functions, Wright-Patterson Air Force Base (WPAFB) proposes to undertake the following work:

- Relocate current functions from Facility 20745 to Facility 20614. This will include the construction of a 15,000 square foot addition at Facility 20614, the demolition of Facility 20745 and the relocation of existing recreational vehicle storage lot near Facility 20614 to the former outdoor storage lot near Facility 20745.
- Relocate current functions in Facilities 30017 and 30029 to Facility 30022. This will include interior renovation of Facility 30022 and demolition of Facilities 30017 and 30029.
- Relocate current functions in Facility 30021 to Facility 30016. New functions will not require any physical alterations to Facility 30016. Facility 30021 will be demolished.
- Construct new gravel recreational vehicle storage lot on the Tillman Pit on Harshman Road.

Based on the information you provided in your submission, I concur that the proposed undertaking will have no adverse effect on historic properties. Proposed demolition and renovation work will not occur at any historic properties. In addition, it is unlikely that indirect effects from the proposed work will compromise the integrity of historic properties located in the Area of Potential Effects.

No further coordination is required unless there are changes to the project scope. In such a situation, this office should be contacted as per 36 CFR Section 800.13. If you have any questions, please contact me by phone at (614) 298-2000 or by email at [jbertram@ohiohistory.org](mailto:jbertram@ohiohistory.org). Thank you.

Sincerely,

  
Jamie Bertram, Project Reviews Manager  
Resource Protection and Review

OHIO HISTORICAL SOCIETY  
Ohio Historic Preservation Office

1982 Velma Avenue, Columbus, Ohio 43211-2497 ph: 614.298.2000 fx: 614.298.2037  
[www.ohiohistory.org](http://www.ohiohistory.org)

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DEPARTMENT OF THE AIR FORCE  
HEADQUARTERS 88TH AIR BASE WING (AFMC)  
WRIGHT-PATTERSON AIR FORCE BASE, OHIO

30 April 2012

88 ABW/CEANQ  
1450 Littrell Road, Building 22  
Wright-Patterson AFB, OH 45433-5209

Dr. Mary Knapp  
U.S. Fish and Wildlife Service  
4625 Morse Road, Suite 104  
Columbus, OH 43230

Dear Dr. Knapp

Wright-Patterson Air Force Base (WPAFB) is preparing an Environmental Assessment (EA) in accordance with the requirements of the National Environmental Policy Act (NEPA) to address potential environmental impacts associated with the proposed action to consolidate the 88<sup>th</sup> Air Base Wing Civil Engineering (CE) operations. WPAFB is seeking informal consultation with your agency in compliance with Section 7 of the Endangered Species Act regarding this proposed action.

The proposed action would consolidate CE operations in Areas A and B of the base. In Area A, Facility 30022 would undergo internal renovations to reorganize the existing operations in the building and to relocate ancillary operations from two smaller, adjacent buildings. In Area B, the CE grounds and maintenance operations would be relocated from Facility 20745 to Facility 20614. A 15,000 square foot addition onto Facility 20614 would be constructed to accommodate the relocated grounds and maintenance operations. Construction for the CE facilities would occur on existing pavement and graded lots. The RV storage lot next to Facility 20614 would either be moved to the outdoor equipment storage area south of Facility 20745 being vacated by the grounds and maintenance operations, or a new lot would be constructed near Tillman Pit off Woodman Drive/Harshman Avenue. The Tillman Pit location for RV storage would disturb approximately 13 acres of mowed, vacant ground. The consolidation of CE operations would provide more efficient facilities and replace an older building with structural damage and failing roof system. The locations of the facilities involved in the proposed actions are shown on the attached Project Locator Map and Project Site Plan figures.

WPAFB has determined four federally listed endangered species are known to or may occur on the base, including the Indiana bat (*Myotis sodalis*), clubshell mussel (*Pleurobema clava*), snuffbox mussel (*Epioblasma triquetra*), and rayed bean mussel (*Villosa fabalis*). The eastern massasauga rattlesnake (*Sistrurus catenatus*), a federal candidate species, may also occur on WPAFB. Based on our review of the February 2012 revised list for Greene and Montgomery counties ([www.fws.gov/midwest/endangered/section7/sppranges/ohio-ctv.html](http://www.fws.gov/midwest/endangered/section7/sppranges/ohio-ctv.html)), no other threatened, endangered, proposed, or candidate species are known to or may occur in the project area. No critical habitat has been designated or proposed for WPAFB.

Because the project area is not within suitable habitat and any potential habitat will not be disturbed, no listed species will be directly or indirectly impacted. Furthermore, there will be no impacts to trees, wetlands, or other native habitat that may support the above listed species. WPAFB has therefore

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determined the proposed project will have no effect on listed species and further consultation with your office is not necessary. Your written concurrence with this determination of no effect is, however, requested.

Thank you for your assistance. If there are any questions or additional detail is needed, please contact me by telephone at 937-257-4857 or by e-mail at [darryn.warner@wpafb.af.mil](mailto:darryn.warner@wpafb.af.mil).

Sincerely

DARRYN M. WARNER  
Natural Resources Program Manager  
Environmental Quality Section  
Environmental Branch

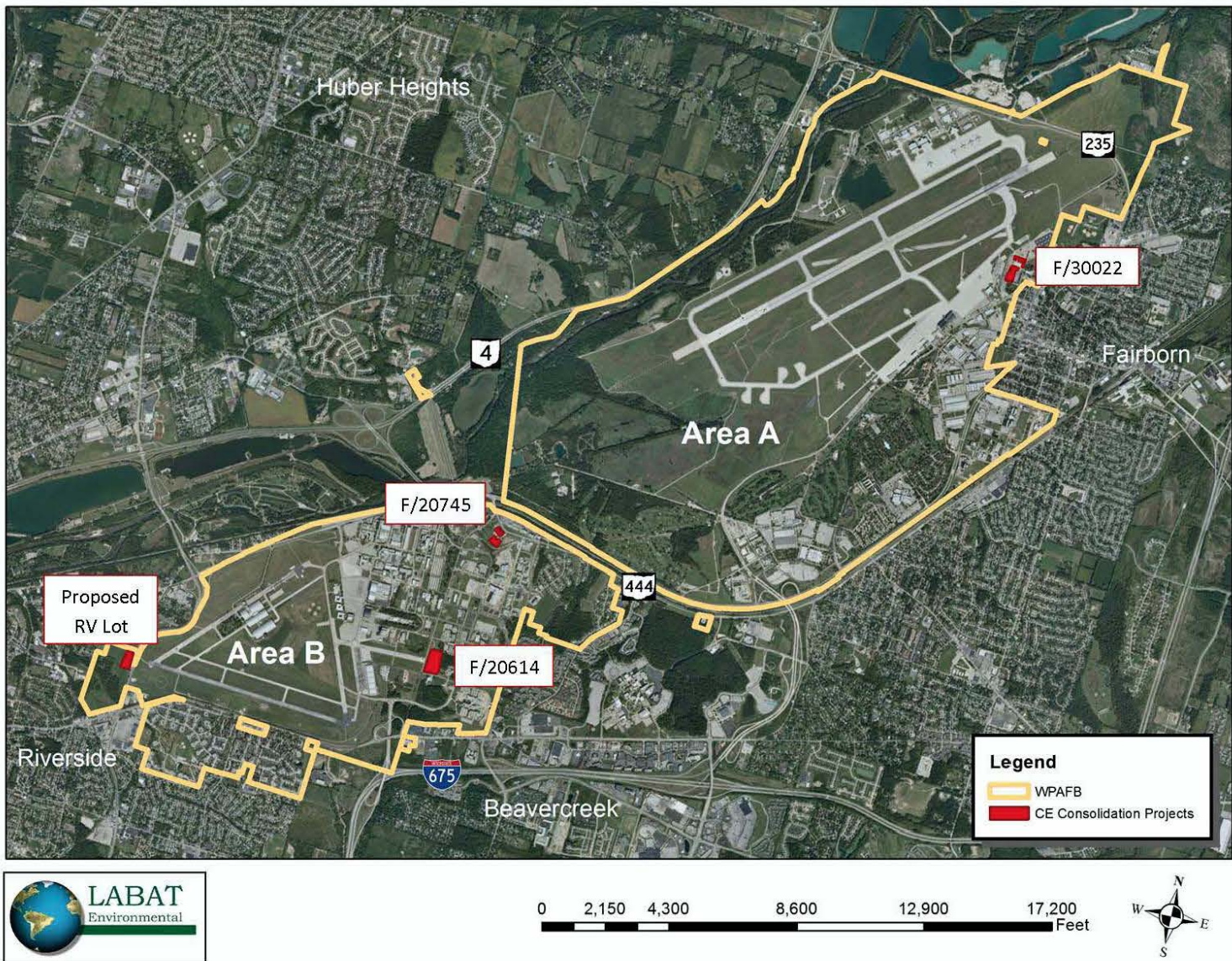
Attachments:

1. Project Locator Map
2. Figures 1-3 – Project Site Plans

cc:

Karen Beason (88 ABW/CEAOR, WPAFB)





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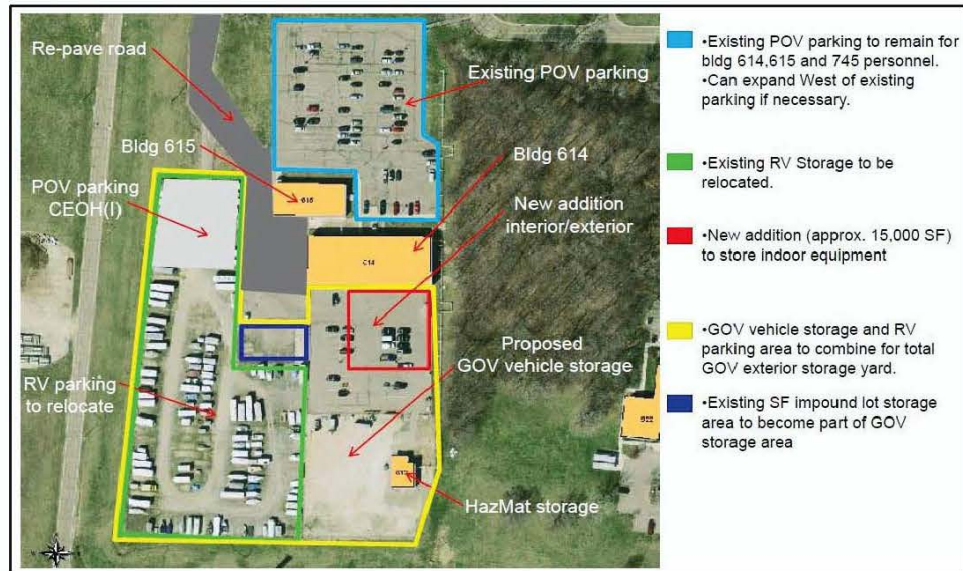


Figure 1 – Facility 20614 Site Plan

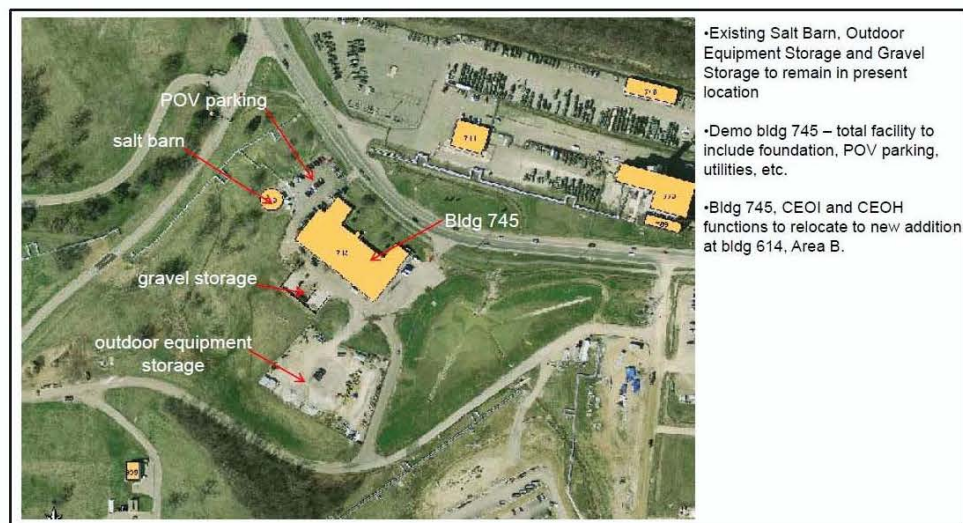
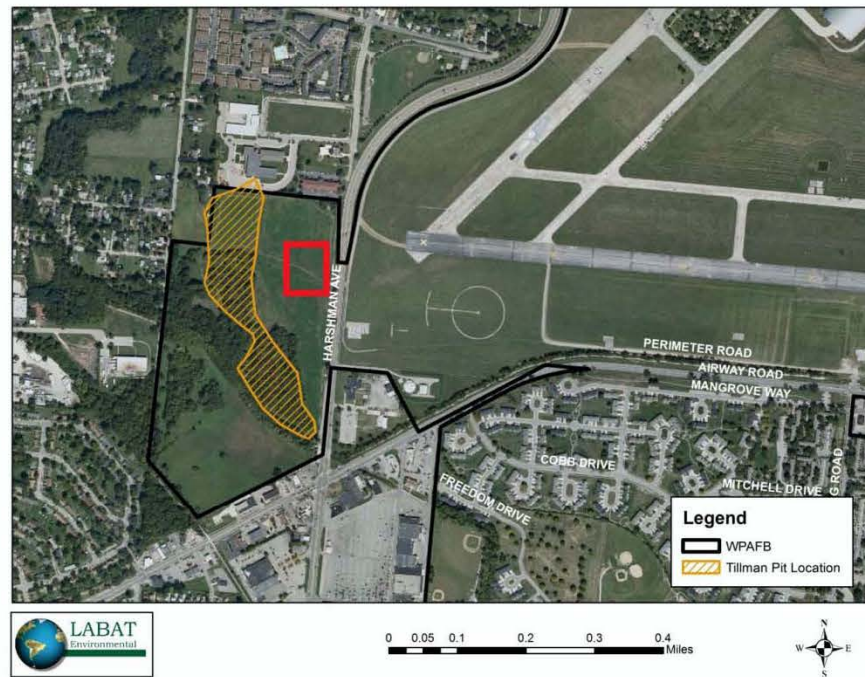


Figure 2 – Facility 20745 Site Plan







**United States Department of the Interior**

**FISH AND WILDLIFE SERVICE**

Ecological Services  
4625 Morse Road, Suite 104  
Columbus, Ohio 43230  
(614) 416-8993 / FAX (614) 416-8994  
May 8, 2012

Darryn M. Warner  
Natural Resources Program Manager  
Department of the Air Force  
88 ABW/CEANQ  
1450 Littrell Road, Building 22  
Wright-Patterson AFB, OH 45433-5209

Reference: Proposed action to consolidate the 88<sup>th</sup> Air Base Wing Civil Engineering Operations

Dear Mr. Warner

TAILS#: 03E15000-2012-TA-0758

We have received your recent correspondence requesting information about the subject proposal. There are no Federal wilderness areas, wildlife refuges or designated critical habitat within the vicinity of the project area. Based on the information you have provided, at this time we have no objection to the proposed project.

ENDANGERED SPECIES COMMENTS: Due to the project type, size, and location, we do not anticipate any impact on federally listed endangered, threatened, or candidate species, or their habitats. Should the project design change, or during the term of this action, additional information on listed or proposed species or their critical habitat become available, or if new information reveals effects of the action that were not previously considered, consultation with the Service should be initiated to assess any potential impacts.

If you have additional questions or require further assistance with your project proposal, please contact me at the following number (614) 416-8993, x12. I would be happy to discuss the project in further detail with you and provide additional assistance if necessary. In addition, you can find more information on natural resources in Ohio, and a county list of federally threatened and endangered species in Ohio, by visiting our homepage at: <http://www.fws.gov/midwest/ohio>.

Sincerely,

Mary Knapp, Ph.D.  
Field Supervisor